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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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LAKE CARRIERS ASSOCIATION.

(EXECUTIVE COMMITTEE MEETING.)

Owing to the absence of some of the members an informal meeting of the executive committee of the Lake Carriers' Association was held on Tuesday, in the office of Capt. James Corrigan, Cleveland. The questions to be taken up at Washington were discussed and it was decided to take no action until the commiittee on "Soo" river improvements, appointed by President Farrington, reached Washington. Capt. James Corrigan, chairman of the executive committee, received a letter from President Farrington announcing the members of the committee, which is made up as follows: A. B. Wolvin, Duluth; Capt. Edward Smith, E. T. Evans, Buffalo; H. Coulby, Capt. James Corrigan, Cleveland; Dennis Sullivan, Chicago; W. E. Fitzgerald, David Vance, Milwaukee, and William Livingstone, Detroit.

President W. C. Farrington, Secretary Charles H. Keep, Counsel H. D. Goulder and other members of the association will meet with the committee at Washington on Friday morning.

It was decided that Harvey D. Goulder, Esq., the general counsel for the Lake Carriers' Association, should be spokesman for the delegation and should present the matter of the lake levels as fully as possible and make the wish of the association known regarding them. The committee formally declared it to be the desire of the Lake Carriers to have a joint commision appointed by the United States and Canada to control the levels of the lakes, as far as that sort of an organization can control such matters.

The especial province of the commission will be to decide on all requests touching privileges to drain the lakes by extending drainage or other canals from them to interior points, or by diverting the water of navigable streams for the purpose of making power to run any sort of a manufacturing plant. The questions touching on this matter were discussed at length, two hours in all being consumed. The committee will leave here to-day and will appear before the committee immediately upon their arrival in Washington.

Harvey D. Goulder, Esq., telegraphed Congressman Burton stating that there would be a strong delegation from Cleveland and the Lake Carriers' Association in Washington on Friday, to appear before the Committee on Rivers and and Harbors to attend the hearing on the subject of the power canal around St. Mary's river, Michigan. Another important hearing will be held by the River and Harbor Committee, on the bill of Representative Corliss, of Michigan, to build a dam at or near Niagara Falls, in order to raise the levels of Lake Erie. A strong delegation from many points on the Great Lakes will attend the whole question of lake levels, about which the marine interests are very much concerned, will be a matter of serious consideration, and that they will urge Congress take no action either on the Niagara dam or other matters affecting lake levels until a joint commission can be appointed by the United States and Canada to consider the question.

ENGINE-ROOM SIGNALS CHANGED.

NOTICE TO MASTERS, PILOTS, AND ENGINEERS ON THE GREAT LAKES, OF CHANGE OF SIGNALS BETWEEN THE PILOT HOUSE AND ENGINE ROOM, FOR STARTING, STOPPING, AND BACKING THE ENGINE.

TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE.
OFFICE OF THE SUPERVISING INSPECTOR GENERAL,
WASHINGTON, D. C., February 8, 1900.

To Masters, Pilots, and Engineers of Steamers Navigating "The Great Lakes and their Connecting and Tributary Waters as far East as Montreal:"

Your attention is called to a change in section 25, Rule V, Rules and Regulations of the Board of Supervising Inspectors, relating to starting, stopping, and backing signals, as indicated in the following report of the Committee on Pilot Rules for the Great Lakes:

There shall be used between the master or pilot and engineer the following code of signals, to be made by bell or whistle, namely:

1 whistle or 1 bell.....Go ahead
1 whistle or 1 bell.....Stop
2 whistles or 2 bells.....Back
4 whistles or 4 bells.....Strong
4 whistles or 4 bells.....All right

Two whistles or two bells shall always mean back, irrespective of other signals previously given.

Section 25, Rule V, amended as above indicated, having received the approval of the Secretary of the Treasury, has now all the force of statute law, and must be observed accordingly by masters, pilots, and engineers. Officers who fail to observe the above rule as amended will lay themselves liable to the penalties provided by law.

JAS. A. DUMONT,
Supervising Inspector-General.

APPROVED: O. L. SPALDING, Acting Secretary.

GERMAN SHIPBUILDING IN 1899.

For some years Germany has stood second to Great Britain in respect of the amount of tonnage turned out from her shipyards or built abroad for German account. In the list for the year 1898, however, she had to yield the second place to the United States, on account of the number of war vessels built in the States in that year. But in the shipbuilding statistics for 1899 Germany resumed her place as next to Great Britain. According to Lloyd's statistics the German activity in shipbuilding last year (ships built at home or abroad for German account) is represented by 252,000 tons, of which 40,000 tons were war vessels, while the figures given for the United States are 233,000 tons, of which 9,000 tons were war vessels. The figures for Germany are not quite the same as are published in Hamburg by the Bureau Veritas for Germany, but we take it that they are as correct as they can be made.

Queen Olga, of Greece, is an admiral in the Russian fleet, a title which was conferred on her by Alexander II., and, as the Petropaulovski was at the Piræus, she went on board and gave each one of the sailors a little present, at the same time wishing them all a happy new year. The ship's company were then given a dinner, and dancing and music wound up the festival. The Russian minister at Athens was also present.

THE LIGHT-HOUSE ESTABLISHMENT.

At the close of the fiscal year which ended June 30, 1899, there were under the control of the United States light-house establishment a total of 8,856 aids to navigation, including light-houses, vessels, electric whistling, bell and gas buoys, post lights, stakes, etc. These were taken care of by a force of 3,985 men and 47 vessels. Light-keepers numbered 1,373, other employes, including crews of light-ships and tenders 1,249, laborers in charge of port lights 1,363.

The appropriation for supplies of light-houses for 1893 to and including 1897, was $385,000 for each year, in 1898 it was $400,000, for 1899 $425,000 and that for 1900 was $450,000, the number of light stations has been increased from 951 in 1893 to 1,199 in 1899.

The Light-House Board in its annual report states that in spite of the severe economy used, there is danger that the present lights and those which are being built can not be properly kept up without an increase of appropriation, and $500,000 is therefore estimated as the lowest possible amount needed to provide supplies during the fiscal year. On March 3, 1899, Congress appropriated $700,000 for salaries, fuel, rations, rent of quarters where necessary, and similar incidental expenses of not exceeding 1,400 light-house and fog-signal keepers and laborers attending other lights for the fiscal year ending June 30, 1900. The Light-House Board had asked an appropriation of $800,000 for this purpose.

There are now on duty in the Light-House Establishment 1,382 light-house and fog-signal keepers, etc. There are 37 light-houses in process of construction, which it is expected will be finished and ready for lighting during the current fiscal year. This leaves a margin of but 12 keepers, etc., to man 37 light-houses, whereas at least 75 will be needed for that purpose.

Previous appropriations have been so small that the Board has been unable to increase the pay of light-keepers in proportion as they had gained experience and increased in value to the service; hence the board has been unable to retain some of its most reliable keepers and it is deemed for the best interests of the service to increase the pay of keepers holding the more important positions. The average pay of light-keepers is fixed by statute at $600 per year. There are now in the service 1,382 keepers, and it would take $829,200 to pay them if they received the average pay fixed by the statute. The sum asked from Congress with which to pay light-keepers, etc., can not be called an estimate, for it is reached by the addition of fixed and known items and is the result of close caculation.

IRON PRESERVED FROM RUST.

The natives of Natal lately noticed, in gathering a certain kind of rubber pitch (eurphorbium), used for medicinal purposes, that knives used in cutting the plant were impervious to rust. The knives were covered with a thin tenacious coating which protected them against oxidation. The authorities took the matter in hand and found that iron and steel coated with this substance and immersed in sea water for two years showed no signs of rust. It was also discovered that this material protects wood from the ravages of ants, which are one of the worst enemies of civilization in the tropics.

The foregoing, which we take from one of our exchanges, seems almost too good to be true, after the untold experiments which have been going on for the past several decades to discover an anti-corrosive. It may be noticed that the article mentions nothing about the anti-fouling properties of the pitchy or rubber substance. The fouling of iron and steel ships' bottoms in salt water calls for equally as much attention as the corrosion, though certainly, where the surface is bare. both will set in.

BUFFALO.

Special Correspondence to The Marine Record.

Dunn and Madden have opened up a ship chandler store at Tonawanda, N. Y. Capt. Jas. Madden is a retired vessel master and owner and Mr. Dunn is interested in harbor tugs at that place.

If the Weather Bureau man could have foreseen the recent thaw and consequent ice jam, about $200,000 worth of property might have been saved; half of this amount is said to represent the damage to shipping.

The Secretary of the Treasury is favorable to an appropriation for building a marine hospital at this port. The sum required is estimated at $125,000 for a sixty cot hospital, so constructed that wings could be added when an enlargement of the institution was found necessary.

Robison Bros., lumber shippers of Tonawanda, bought the steamer C. H. Green and schooner Genoa Monday. The purchase price was not given out. The action of this firm in securing its own vessels, it is said, is warranted by the immense trade secured for next season.

The Great Lakes Towing Co. bought over the Hartman tug line of Tonawanda this week, but there are two independent tugs. Capt Michael Dunn says that these tugs will be used for transferring canal boats and will not be engaged in river towing; in any case, he is friendly toward the tug trust than otherwise and will not pose as the opposition line.

It is announced that the State will add several millions more small fish to the waters of the lower Niagara river this spring. They will be brought from the Caledonia hatchery and will be placed at appropriate stations. Last year more than 5,000,000 fish were placed in the river by the State or Federal authorities. The Fishery Commissioners apparently desire that the supply of fish in the river and Lake Ontario should not be exhausted.

The iron workers at the yards of the Union Dry Dock Co have been out on strike all week, and though several confabs have been had with Mr. Gaskin, superintendent of the yard, no agreement has been arrived at. There are several grievances in the men's complaint, one of which is a lax system of time keeping. With the new work on hand, two vessels in dock, besides the heavy damage done to vessels by the recent freshet in the river, every day that the works are shut down means double time now.

Major F. W. Symons of the United States Corps of Engineers was in the city to-day. Captain Graham D. Fitch transferred to Major Symons temporarily the work of river and harbor improvements and fortifications in the Oswego district as he is going abroad. He will resume charge April 26. Friends of Major W. S. Stanton, who was in Oswego a few years ago, will be interested to learn that he has recently been promoted to the rank of Lieutenant Colonel of Engineers. The position is a most responsible one, but Major Stanton is fully capable of assuming it.—Oswego Daily Times.

Buffalo Creek is again opened for through navigation. The steel steamer Carnegie was finally released from her awkward position above Michigan street bridge and was towed to the Kellogg Elevator dock. With the Carnegie out of the way and all the damaged vessels now in a position to be examined by surveyors, the work of settling upon the cost of repairs can soon be adjusted. Most of the owners of the damaged vessels are protected against loss by the boats being covered with full-year insurance policies. Further attempts have been made to work the Michigan street bridge but there is every indication that considerable repair work will have to be done before the bridge is again ready for traffic.

Resolutions protesting against the passage of any bill by Congress calling for the damming of the Niagara River with the purpose of raising the levels of the Great Lakes, were passed by the Tonawanda Lumbermen's Association, the Board of Aldermen and Board of Trade on Monday. The resolutions, as passed by all these bodies, denounce in emphatic terms both the Corliss bill and the Mather power bridge proposition, which is now before the State Legislature. The resolutions call upon the several local representatives in Congress and the State Legislature to fight these bills to the last. Copies of the resolutions were sent to Congressman Wadsworth and to Senator Ellsworth and Assemblyman Darrison. The features of the several meetings was the bitter denunciation of the scheme to place an obstacle in Niagara river channel, as it was the general feeling that by so doing the commercial interests of the Twin Cities would be ruined. Mayor Hastings, of Niagara Falls, was empowered to proceed to Washington and oppose the measure by all possible means.

That was a great fake story sent from Cleveland recently about the Northern Steamship Co. wanting to let go of their tonnage, when it is well known that the company has been chartering outside boats. President J. J. Hill, when building his cargo fleet over ten years ago, would have given the order for boats 500 feet in length, only he was switched off the track, but your readers may depend that there will be no shunting him from his purpose when he places the next contract for lake cargo boats, nor will wooden decks, or spars, etc., be shoved on to him either. The president of the Northern Steamship Co., as well as Mr. Farrington, the vice president, with headquarters at this port, are not only fully abreast, but well ahead of the times, and they can handle transportation interests, including lake tonnage, to the very best advantage, so that if there was money in their fleet for other parties there is more in it for themselves, or rather the Northern Steamship Co. The Cleveland man that slated such an asinine report was a jay of the gayest plumage and nothing else.

There does not seem to have been much action taken of any note, at the annual meeting of the grand lodge of the Shipmasters' Association, although there was plenty of life and a time enjoyable. Officers were elected, etc., but it was rather expected that the several local lodges would have had a batch of data on prevailing lake customs and fashions. The two-whistle signal was brought up and the decision clashes with the ruling of the head of the service at Washington. The following preamble and resolution offered by Capt. Pierce, Port Huron: "Whereas, in the development of the trade and industry of the United States, and the fostering of its foreign trade, both in products of the soil and workshop, there is no factor of greater importance than cheap transportation between the great producing and manufacturing territory along the Great Lakes and the Atlantic seaboard; and Whereas, It is of the utmost importance to the Uuited States that the line of transportation between the lakes and the seaboard should be through American territory; and Whereas, The State of New York is considering the expenditure of about $60,000 000 for building a first-class, modern canal from Lake Erie to the Hudson river, able to float boats carrying four times the capacity of the present canal boats, and to transport freight at rates sufficiently low to meet all competition for a generation to come, now, therefore be it Resolved, That the Shipmasters' Association, in annual convention assembled, the members of which are masters of vessels plying between the Great Lakes, and therefore familiar with the conditions of lake transportation and the magnitude and growth of the lake traffic, does hereby congratulate the State of New York that it has at last awakened to the importance of an American route, from the lakes to the seaboard, adequate to meet all competition, and heartily favors the plan for rebuilding the Erie canal, which has been recommended by the State Canal Commission, and hereby expresses the hope that the same will be carried into effect at the earliest possible date. Resolved, that copies of this resolution be forwarded to the Governor of the State of New York and to the Hon. Henry W. Hill, chairman of the Canal Committee of the New York State Assembly." The convention honored Capt. Alexander J. McKay, of Detroit, by electing him grand president of the association. Capt. McKay is master of the steamer City of Detroit. Capt. Charles Hubbard, of Chicago, was elected first vice president. He is master of the light-house tender Dahlia, Capt. J. A. Ward, of Marine City, was chosen second vice president. Capt. E. G. Ashley, of Toledo, was elected secretary. Capt. W. A. Collier, of Cleveland, was unanimously indorsed for the office, but he explained to the convention that his arduous duties prevented him from accepting the place. He was then unanimously elected grand treasurer, which office will not take up so much of his time. Capt. Ralph E. Byrnes, of Cleveland, master of the steamer Douglas Houghton, was elected chaplain. Capt. Geo. W. Pierce, of Port Huron, was chosen marshal and Capt. E. C. Maytham, of Buffalo, was chosen warden. Capt. J. McKinley, of Toledo, was elected sentinel.

CHICAGO.

Special Correspondence to The Marine Record.

Capt. John Hubbard has been appointed master of the fire boat Illinois.

Capt. John Nicholson will be master of the steamer Pnile-tus Sawyer the coming season.

The many friends of Capt. John Higgie will be pleased to know that he is recovering from a severe attack of pneumonia.

Capt. John S. McNeil, of Bay City, Mich., Harry Richardson, of East Aurora, N. Y., and William H. Evans, of St. Joseph, Mich., are in Chicago this week.

Capt. James Godman, Thos. Higgins, Thos. Ledden and David M. Cochrane, have recently become members of Chicago Branch 3, of the Shipmasters' Association.

The schooner Hattie Hutt has been sold by Capt. Ole Hanson, of Manitowoc, to Capt. James Ericsson of Miwaukee, recently, master of the schooner Charles Luling.

Frank H. Osborn, insurance agent, goes to New York this week and will sail for London, Saturday, on the steamship Etruria, on a business trip. He expects to be back in about a month.

The Chicago Ship Building Co. commenced Saturday building another large steel barge for the Minnesota Steamship Co. She will be of the same dimensions as the Madeira recently launched for the same owners.

Capt. John Roberts for several years harbor master at this port, has resigned his office, he was one of the best harbor masters Chicago ever had, always courteous and attentive to his duties. He has been succeeded by Capt. Joseph Lamoreaux.

Capt. James S. Dunham and wife left here for New York Tuesday, they will embark on the steamship Columbia, of the Hamburg American line, Thursday morning and sail for Naples. It is their intention to spend some time in Italy and pay Rome a visit, after which they will go to London, and from there to the Paris exposition before returning home.

The Chicago & Muskegon Transportation Co. was incorporated here this week, the incorporators being Miles E. Barry, H. P. Breer and L. F. Chapman. Negotiations are pending for the purchase of four passenger and freight boats by the new company, to be ready for business by the opening of navigation. The boats will run between Chicago and Muskegon.

The steamer Fayette has been sold to a company of which Capt. James Sanford, of Muskegon, Mich., is manager. The vessel is now at Muskegon being rebuilt and will be given new keelsons, 3,000 feet of new deck plank, new boiler house and cabins, six new deck beams, a new steeple compound engine with cylinders 18 and 36 inches in diameter and 28 inches stroke. The vessel will probably be re-named the Matthew Wilson.

We have not been taking a very active part in the lake level discussion or the various theories advanced to maintain same. Said a prominent vessel agent here this week: "Personally, and from a standpoint which means the greatest good to the greatest number, I can but say that the MARINE RECORD has accomplished a wonderful work in its six months' campaign on this subject, and it has been ably supported by the published opinions of the best talent in the country. The subject has been brought prominently before Congress, and all cognate marine interests are now awakened to the folly of lowering lake levels by drawing off the supply. But there, we can't say too much, as our own canal is yet an unknown factor in the question of robbing the level of Lake Michigan. In any case, the RECORD, almost unaided from other sources, is to be given the credit for bringing the question to where it is at the present time."

CLEVELAND.

Special Correspondence to the Marine Record:

Capt. Fred Houghton will take charge of the steamer J. J. Hill to be launched at Lorain a week from Saturday.

Capt. William Gerlach, manager of the Minch fleet, has gone to Florida on a vacation. He will return about the middle of March.

Mr. D. E. Lynn, representing the National Lead Co., New York, spent the week in this city, visiting vessel owners and masters, his business acquaintances and marine friends, in the interests of his firm. Mr. Lynn is well and favorably known at all lake ports.

The stockholders of the Cuyahoga Transit Co., the Smith Transit Co.. and the Eureka Transit Co. held their annual meetings on Wednesday, at Mentor. All the officers were re-elected. The vessels operated by these companies are handled in the office of Hawgood & Moore.

The furnaces want iron ore and every effort is being made to facilitate dock shipments at Lake Erie ports. It is expected that the docks and storage piles at Ashtabula will be clean swept by the middle of April, providing, of course, that no very hard weather sets in so as to delay trains.

Mr. Norman B. Conger, local forecast official and marine agent Weather Bureau, Detroit, passed through the city en route to Washington on Tuesday. The duty of reporting ice conditions at lake ports will be placed in the hands of Mr. Conger from now on to the opening of free navigation on the several lakes.

The large repairs on the steamer Alex McDougall will wind up the heaviest part of the winter's dry dock work at Lorain. Of course there will always be "lame ducks" to patch up, but the season's contracts are about filled and the dry docks will now be ready for anything that comes along. It is often found advantageous for vessels to change ports so as to get the facilities offered in Cleveland and Lorain, and in this event some of the recently damaged craft may be brought here from Buffalo.

In response to petitions from the Shipmasters' Association of Cleveland, Detroit and Port Huron and the Lake Carriers' Association, Congressman Burton has introduced two resolutions in the House providing for the re-location of certain lights in the northern part of Lake Michigan, near the Straits. Under the resolutions the light-ship at Simmons reef is to be transferred to Lansing reef and the gas buoy at the latter place is to take the place of the light-ship. The light-ship on Gray's reef is to be moved further south.

The specifications for the work on the harbors of Fairport and Lorain have been returned from Washington, whither Colonel Jared A. Smith, Corps of Engineers, U. S. A., sent them for approval. The improvements outlined in the plans are for a breakwater at both places and some new pier work that has long been needed, especially at Lorain. As soon as the specifications have been made to conform to the suggestions of the department at Washington, they will be submitted to the contractors for their propositions.

The case of the Lake Superior Iron Co. against the steamer L. P. Waldo was tried about a year ago by Judge Ricks in the United States District Court. The suit was brought to recover damages for a collision between the steamers Choctaw and L. P. Waldo, and was fiercely contested at the trial which resulted in a verdict in favor of the

libelant for the sum of $27,325.62. The respondent carried the case to the United States Circuit Court of Appeals, which court has just affirmed the decision of Judge Ricks in a lengthy opinion written by Judge Lurton.

Drake, Bartow & Co. have bought the steamer Alcona and schooner Alta from the Ohio & Pennsylvania Transit Co. The price paid was about $50,000. The O. & P. Transit Co., of which J. B. Zerbe is president and Samuel Needs is secretary and treasurer, is now out of the vessel business. The Alcona and Alta were the only vessels owned by that company. They are small vessels and carry about 3,000 tons. Drake, Bartow & Co. have also chartered the steel steamer J. W. Moore, Capt. Richard Neville, for the season. They pay the insurance and all other expenses, and the owners get $40,000 for the use of the boat.

Mr. Quincy Miller, senior member of the late firm of Miller & Johnson, boiler makers and sheet iron workers, Elm street, has purchased the interests of his partner and is now operating the plant himself. Among other orders and work now being carried on are a set of new tanks for the Williamson building and a similar order for the Western Reserve building; figuring is also being done on structural work for Pittsburg parties, as well as several minor jobs in stationary and marine work. Mr. Miller says that the beginning of the year shows work and orders as brisk as could be desired, with every indication of their continuance.

The Ashtabula Beacon in a recent issue copied a paragraph from the MARINE RECORD which said that the John W. Gates was not 500 feet long. The paper goes on to say that the Gates is only 297 feet long. Ashtabula must be jealous of Lorain's shipyards and is trying to belittle the largest boat on the lakes by saying it is only 297 feet long. The Gates lacks only 36 inches of being 500 feet long, and if the force of the Beacon will come here on the 24th they can see the Gates and the launch of a sister ship, the J. J. Hill.—The Evening Herald, Lorain. A slight typographical error in the Beacon gave the Herald a chance to make this dig at the Beacon. For 297 feet in length read 497 feet, and then we'll all be all right.

With so much tonnage under season charters for iron ore, freights on grain, coal and lumber will likely be fairly stiff, and with the boats not yet placed, there is a hold off for better figures than has yet been offered. Vessels want 75 cents on coal to Milwaukee, 65 cents offered. From Duluth, 3½ cents for opening shipments has been taken; Georgian Bay, 3¼ cents on wheat and 3 cents on corn. The Montreal route has had a wet blanket thrown over it because the St. Lawrence route won't permit the 14-foot draft so widely heralded by the Canadian people last winter. It is reported as an unsafe channel as at present constructed, and extra insurance will pawl traffic.

The Masters' and Pilots' Association gave a smoker on Tuesday evening, at their rooms on Superior street. The quarters were well filled and the guests numbered the members, those who have been members in the past and who are renewing their relations, and others whose faces are new to the association. Capt. Lee Brogan, president, Captain W. A. Collier and Captain C. E. Benham, and Captain C. A. Benham made addresses. Aftert his the evening was given over to social pleasure. The smoker was such a success not withstanding the stormy, rainy evening that it was decided to hold another one in the near future. At that time it is expected that John C. Silvia, grand captain of the order, will be present.

Many men have thought that the numerous articles published in the RECORD throughout last summer would not amount to very much although they were pleased to read the opinions of the talented correspondents. There is a change of sentiment here now, and prominent men have flocked to Washington this week to work for the proper maintenance of lake levels, even the Chamber of Commerce has sent a newspaper man to represent the maritime board of that institution, though what he can say or do, that has not been already ventilated is more than a long-headed horse could imagine, besides, there are men giving evidence before the River and Harbor Committee who by training, education and study, are in a position to offer scientific opinions.

DETROIT.

Special Correspondence to The Marine Record.

An official number has been assigned the steamer Admiral built at Wyandotte and hailing from this port. Her tonnage is 4,651 gross and 3,547 net.

United States Fish Commission car No. 3 has commenced the distribution of eyed eggs and young fry from the station at Northville. Trips will be made to this port, to Alpena and other points.

The expected session of the grain committee of the Lake Carriers' Association will not be held this week, and no call for the meeting has been issued as yet. This is the committee that will settle the grain contract question. L. C. Waldo is chairman of the committee.

J. W. Hanna, solicitor for James Dickinson, editor of the Windsor World, has issued a writ against the Dominion Steamship Company, asking $8,000 damages for the death of Mrs. Dickinson, who was one of the victims in the Scotsman disaster in the Straits of Belle Isle last year. The writ was served on A. M. Stewart, the Windsor agent of the company. Mr. Dickinson claims that the company would not surrender the baggage belonging to his wife, until he went to Montreal himself and secured possession of it.

The Treasury Department at Washington has instructed the customs officials on the Great Lakes that inspection fees and dues assessed by the Canadian government on American steam vessels since Jan. 1, 1898, will be refunded to the owners of vessels by this government on proper presentation of claims to the department. It appears that there were reciprocal arrangements between the two governments relative to the inspection of steam vessels of both countries, which was not lived up to by the Canadians. The department has therefore determined to refund the amounts demanded and collected from American owners.

The Michigan naval militia object to being placed under national jurisdiction. The reserves are now a state institution and desire to remain so. It is further said that the militiamen all over the country consider this a direct slap at their organization at the instigation of its enemies, although the measure is said to have the approval of the administration. It should be remembered, however, that while each state has an enrolled militia, no state is in possession of a navy and naval reserves are a distinct arm of the federal service or nothing, otherwise, a battleship would need to be awarded to each state providing a naval reserve in war times.

Some questions will be up at the meeting of the Central Freight Association, to be held in Chicago this week. The new classification is creating trouble. From Toledo a general demoralization of lumber rates has spread to the other ports. Sandusky, Cleveland and Detroit lines have not been maintaining lumber rates at the agreed official classification and are going after the lumber traffic just as some of the lines out of Toledo. The lake lines will make a strong protest against the new classification. It is claimed that the new rate is unjust to the northern lumber shippers. If the classification is maintained it will keep Michigan and Wisconsin lumber out of Ohio, as the rates from the south are lower than those from the lake ports.

John M. Nicol of this city says that he was the projector of the Quebec and Lake Huron railway, the proposed new air line between Georgian Bay and Atlantic tidewater. Said Mr. Nicol: "The line will be about 461 miles in a straight line, through a new and unsettled portion of Canada, and would shorten the grain haul from Chicago and Duluth to the seaboard by fully 500 miles. The rail route would be about the same length as that from Buffalo to New York, saving all the lake distance between Georgian Bay and Buffalo. From Quebec to Liverpool is called 2,660 miles; from New York to Liverpool, 3,130 miles, giving us another 470 miles saved on the ocean, or nearly 1,000 miles less distance over our road to Liverpool from either Duluth or Chicago than over the present routes."

John Shaw, Esq., proctor in admiralty, is in Washington this week as counsel for and representing the Lake Superior Power Canal Co. that is now constructing a power canal from a point above St. Mary's Falls to a point below it. It is feared that the construction of the power canal will injure the levels of the ship canal and for that reason the rivers and harbors committee has taken the matter up and will listen to arguments Friday morning. At this hearing there will be present a strong delegation representing the marine interests of the Great Lakes headed by Harvey D. Goulder, Esq., of Cleveland, who is the general counsel of the Lake Carriers' Association. This entire question has been worked up during the past six months by the MARINE RECORD, and I hear lots of praise for the RECORD here on that account.

FLOTSAM, JETSAM AND LAGAN.

Hamburg is rapidly becoming the largest port in the world; within one period of five years she doubled her fleet of steamers. A German liner, the Friedrich Der Grosse, holds the Atlantic record for speed. Most remarkable of all is the progress of German shipbuilding. In the world's returns for 1899, which have just been published, the Vulcan Ship Building yard, of Stettin, takes third place in tonnage, with an output of 65,862 tons.

A report from two Rivers, Wis., states that on account of the prominence of that point, which extends seven miles into the lake, it is frequently possible, when the atmosphere is favorable, to see across Lake Michigan. James Gallagher, light-keeper at Two Rivers, a few nights ago plainly distinguished by its flashes the light on Point Au Sable, Mich., which is sixty-three miles away. In the summer time the banks of the east shore are visible quite frequently.

The old aphorism "different ships, different fashions" has never been better exemplified then in the new 5 masted schooner, Mary W. Brown, recently launched at Bath, Me., she carries a patent stockless anchor, the big hawse pipe for which being only on one bow, while the other bow has a cat head as usual, gives her an odd appearance when seen bow on. This is on a par with sheer-legs fitted in place of masts, but then some main stays lead aft, more lead forrard.

The wings of the sea gulls have become a favorite decoration of woman's bonnets, and the result is that along the lake shore there are men who make a business of shooting these birds for the purpose of getting their plumage and selling it. Now the Ohio fishermen propose to put a stop to this practice by asking the legislature to add an amendment to the fish and game law which will protect gulls, of which no mention is made in the law as it stands at present. The reason the fisherman desire to have gulls protected is because they are the scavengers of the lakes. They say if it were not for the gulls eating the dead fish that are washed ashore every day, and which float on the lake, the water would soon become so contaminated that fish could not live in it. If such was the case what would the towns along the lake front do for a drinking supply.

OFFICERS APPOINTED FOR 1900.

CONTINUED FROM PAGE 9.

J. S. DUNHAM, MGR., Chicago.—Str. City of London, Capt. Wm. Anderson; Eng. J. J. Staley.

AMERICAN STEAMSHIP CO., Hugh McMillan, Mgr.—Str. Admiral, Capt. Wm. H. Rolls; Eng. P. D. McCabe.

H. J. JOHNSON, Cleveland, O.—Steamer H. J. Johnson, Capt. Charles Miner. Schooner Helvetia, Capt. Wm. Packer.

G. W. PARKER.—Str. D. F. Rose, Capt. Cass. M. Saph; Eng. Herbert Mamon. Schr. Buckeye State, Capt. Wm. D. Angel. Boscobel, Capt. A. J. Young, Jr. Marine City, Capt. A. J. Young, Sr.

J. T. HUTCHINSON & Co., Cleveland.—Str. Germanic, Capt. M. H. Place; Eng. W. G. Thorn. Rube Richards, Capt. H. Savage; Eng. H. Schmidt. Queen of the West, Capt. C. J. DeBeau; Eng. Geo. Blauvelt. Schr. E. C. Hutchinson, Capt. T. K. Woodward. May Richards, Capt. T. S. Emery. BUCKEYE STEAMSHIP CO., C. L. Hutchinson, Mgr.—Str. City of Glasgow, Capt. John McNeff; Eng. C. R. Price.

DETROIT, BELLE ISLE & WINDSOR FERRY CO., Detroit, Mich.—Steamer Pleasure, Capt. John Wilkinson; Eng. Nicholas Huff. Promise, Capt. Robt. Ferguson; Eng. Henry Free. Sappho, Capt. Geo. D. Horn; Eng. Henry Vaughn. Garland, Capt. M. McCeme. Fortune, Capt. D. Jaques; Eng. Fred. Wolff. Excelsior, Capt. Fred. Tarvis; Eng. S. G. Merrill. Victoria, Capt. John Foster; Eng. Walter Mennie.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo	1,923,000	186,000	152,000	74,000	847,000
" afloat	443,000	205,000	.....	.....	.....
Chicago	14,954,000	4,785,000	1,324,000	180,000	21,000
" afloat	85,000	1,393,000	158,000	.....	.....
Detroit	504,000	366,000	76,000	8,000	40,000
Duluth	7,842,000	567,000	183,000	381,000	157,000
" afloat	248,000	.....	.....	.....	.....
Fort William, Ont.	3,047,000	.....	.....	.....	.....
Milwaukee	236,000	.....	.....	11,000	18,000
" afloat	.....	.....	477,000	.....	.....
Montreal	55,000	20,000	301,000	14,000	29,000
Port Arthur, Ont.	234,000	.....	.....	.....	.....
Toledo	1,088,000	1,224,000	164,000	8,000	.....
Toronto	63,000	.....	4,000	....	40,000
Grand Total	53,805,000	14,709,000	5,968,000	1,119,000	1,506,000
Corresponding Date, 1899	30,161,000	30,624,000	7,115,000	1,587,000	2,922,000
Increase	.....	126,000	192,000	.....	.....
Decrease	558,000	....	.....	15,000	184,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

BOOK NOTICES.

Condensers.—A compilation of 80 pages, 9 by 6 inches, flexible covers, collaborated from a series of lectures and articles upon the subject of condensers, reprinted from the columns of Power, by the Power Publishing Company, World Building, New York, by F. R. Low. The price, which is but 50 cents, should be no bar to the junior machinist having a copy of this plainly written and valuable little treatise on condensers; illustrated.

Van Nostrand's Science Series.—The Use of the Slide Rule, by F. A. Halsey, illustrated. This brochure of 100 pages, 6 by 4 inches, is mainly a reprint of a series of articles which originally appeared in the American Machinist. is more of a guide, than a treatise on the subject with which it deals, and will, without doubt, be found very useful in promoting the use of one of the most valuable labor savers within reach of the average constructing engineer. B. Van Nostrand Co., 23 Murray and 27 Warren Streets, New York. Price, 50c., in stiff covers.

Mr. James M. Swank, General Manager of the American Iron and Steel Association, has just completed a thorough revision of the Association Directory to the Iron and Steel Works of the United States, bringing down to April, 1898, a description of these works. This edition constitutes a cloth-bound volume of nearly 400 well-printed pages—many more than in any previous editions—and it also contains a list of the iron and steel works in Canada and Mexico. These lists are complete and reliable down to date indicated. There are no advertisements in the book. As this work is the only one of the kind published, and as no manufacturer or merchant in Canada, interested in the iron or steel industry can do without the names and addresses of the concerns who manufacture such articles, they should become possessed of this directory. For further information address Mr. James M. Swank, 201 South Fourth Street, Philadelphia, Penn.

THE steamer H. B. Plant, which was recently built by the Merrill Stevens Engineering Co., Jacksonville, Fla., was equipped with the Burnham steam pumps manufactured by the Union Steam Pump Co., Battle Creek, Mich.

The saw mills at the head of the lakes are beginning to rush work nearly sixty days ahead of their ordinary time, so as to catch up with their orders before the snow flies next fall. From this it can be judged that Lake Superior lumber shipments will be rushed from early to late throughout the coming season.

ST. MARY'S FALLS CANALS.

STATISTICAL REPORT OF COMMERCE PASSING THROUGH CANALS AT SAULT STE. MARIE, MICHIGAN AND ONTARIO, DURING SEASON OF 1899. *

The following is the report relative to statistics of commerce passing through the American and Canadian canals at Sault Ste. Marie, Michigan and Ontario, during the season of 1899;

The total freight traffic of 25,255,810 net tons shows an increase of 4,021,146 tons, or 19 per cent. over that for 1898; the total number of passengers was 49,082, an increase of 5,656 or 13 per cent. The open season of navigation covered a period of 7 months and 25 days, during which time the average monthly freight traffic was 3,224,146 tons.

The American canal passed 22,252,139 freight-tons, being an increase of 4,067,988 net tons over the year 1898, or 22 per cent; the number of passengers was 33,664, an increase of 6,106 or 22 per cent, as compared with 1898.

The Canadian canal passed 3,003,671 freight tons, which was a decrease of 46,842 net tons, or 1½ per cent; the number of passengers was 15,418, a decrease of 450, or 3 per cent as compared with 1898.

Of the total freight the American canal passed 88 per cent and 68 6-10 per cent of the total number of passengers; the Canadian canal 12 per cent and 31 4-10 per cent respectively.

The total vessel passages through both canals amounted to 20,255 as against 17,761 for the year 1898, an increase of 2,494 or 14 per cent; the total lockages numbered 10,999 which is 1,466 more than in 1898, or an increase of 15 per cent.

The United States canal was opened May 2 and closed December 18,1899; season 231 days. The Canadian canal was opened April 26 and closed December 20, 1899; season 239 days.

Freight tonnage and passengers—The data relative to these items was compiled from reports made by vessel masters when passing through the American and Canadian locks.

Registered tonnage and vessel valuations.—The net registered tonnage is given, and was obtained from vessel papers and blue books; Vessel valuations were obtained from managers of leading marine insurance companies and from Inland Lloyd's.

Freight rates.—The freight rates were compiled from quotations published in the MARINE RECORD and other papers, and from information received from shippers, owners and carriers engaged in handling the several classes of lake commerce. From the greater interest manifested by the many who furnished valuable data it is believed that the freight rates adopted are very close to the average rates for the entire season's business. . The freight rates given are for transportation and include cost of loading and unloading.

Freight valuations.—The unit values used for the various items of freight were derived by taking the mean for the season of each monthly average as obtained from daily or weekly prices current.

The sources of the valuations given are as follows: Coal, quotations in Coal Trade Journal at Duluth and Superior; cereals, Daily Commercial Record, published by Duluth board of trade; flour, daily quotations in Duluth, Superior and Minneapolis journals; iron ore and pig iron, weekly quotations in Iron Trade Review, MARINE RECORD and other sources; salt, quotations at Lake Superior ports; copper, general merchandise lumber, building stone and manufactured iron, quotations by the principal shippers, owners and carriers.

To quotations given at point of shipment freight rates are added to lake ports of destination.

American vessels carried 96.9 per cent of the total freight and 46 per cent of the total passengers.

Canadian vessels carried 3.1 per cent. of the total freight and 54 per cent of the total passengers.

Unregistered American craft carred 29,659 tons of freight in 324 passages, or an average of 91 1080-2000 tons per passage.

Unregistered Canadian craft carried 1,627 tons of freight in 42 passages, or an average of 38 1476-2000 tons per passage.

Of the 20,255 passages for the season, 4,212 were by 88 vessels under 100 tons register, or an average of 32 tons each. The total freight carried by such amounted to 7,551 tons.

Statistical summary of lake commerce through canals at Sault Ste. Marie, Michigan, and Ontario, for season of 1899:

Total mile tons	20,891,944,628
Total freight carried, net tons	25,255,810
Total valuation placed on freight carried	$281,364,750
Average value per ton of freight carried	$11.14
Total amount paid for freight transportation	$21,959,707.25
Average distance freight was carried, miles	827.2
Cost per mile per ton, mills	1.05
Average cost per ton for freight transportation	$0.87
Total number registered vessels using canals	832
Total number of passages by unregistered craft carrying freight	366
Time American lock was operated, days	231
Time Canadian lock was operated, days	239
Total valuation placed on registered vessels	$68,370,120
Total number of passengers transported	49,082
Freights carried by—	
Registered vessels, tons	25,224,524
Unregistered vessels, tons	31,286
American vessels, per cent	96.9
Canadian vessels, per cent	3.1
Passengers carried by—	
American vessels, per cent	.46
Canadian vessels, per cent	.54

Classification of vessels based on largest single cargo carried by each boat when same exceeded 2,000 tons, arranged in successive graduations of each thousand tons.

Vessels.		Maximum tonnage for one trip.	
No.	Class.	Aggregate.	Average.
74	Steamers	185,840	2,511
114	"	388,030	3,404
13	"	58,825	4,525
19	"	102,981	5,420
18	"	115,618	6,423
10	"	73,853	7,385
1	"	8,215	8,215
35	Sails	80,813	2,309
25	"	88,797	3,552
9	"	40,009	4,445
13	"	75,269	5,790
9	"	57,637	6,404
4	"	32,716	8,179

The above table shows that 344 different vessels in a single trip of each carried a total of 1,308,603 net tons.

The maximum traffic for a single day was on August 7, when 207,962 freight tons were passed by 154 vessels, whose registered tonnage amounted to 156,119.

The minimum traffic for a single day was on December 20, when 9 freight tons were passed by 5 vessels, whose registered tonnage amounted to 148.

TABLE SHOWING CLASSIFICATION OF REGISTERED VESSELS AS TO LENGTH AND BEAM OVER ALL.

Number of Vessels.	Length, between.	Beam, between.
109	— and 100 feet.	7 and 29 feet.
289	100 and 200 feet.	20 and 37 feet.
267	200 and 300 feet.	29 and 45 feet.
126	300 and 400 feet.	38 and 49 feet.
41	400 and 500 feet.	47 and 52 feet.

The depth of water in channels permitted a safe draft of about 18 feet during the season.

The records show that vessels consumed 20,486 hours and 46 minutes in canal, or an average of 1 hour, 14 minutes and 35 seconds, which includes time waiting for lockage and passage through canal and locks. Other delays at canal, which included taking on supplies, waiting for daylight or favorable weather, amounted to 17,773 hours and 40 minutes.

The railway swing bridge across the canal has not delayed the passage of vessels in a single instance, but the total delays to trains amounted to 4 hours and 40 minutes by passing boats temporarily preventing the closing of the bridge.

The canal postoffice handled 97,378 pieces of mail during the season, consisting of 86,097 letters, 5,039 postals, 5,775 newspapers and 467 parcels. In addition to this, 877 pieces were returned to the city postoffice after being held 30 days uncalled for, and 1,372 pieces were forwarded to new addresses. This shows an increase over the previous year of 16,849 pieces of mail.

TABLE SHOWING MAXIMUM RECORDS MADE BY VESSELS DURING THIS SEASON.

Name of Vessel.	Maximum	Amount.	Owners
Steamer Malietoa	Single cargo, tons	8,215	Minnesota S. S. Co.
Barge John Smeaton	Single cargo, tons	8,339	Bessemer S. S. Co.
Steamer Presque Isle	Freight carried, tons	187,816	Cleveland Cliffs Iron Co.
Steamer Andr'w Carnegie	Miles run	42,027	Wilson Transit Co
Steamer H. W. Oliver	Mile-tons	141,475,588	Wilson Transit Co.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD).

Seamen—Wages—Computation of Time.—Seamen whose terms of service end at the same hour of the day at which they commenced work are not entitled to payment of wages both for the day on which they commence and that on which they completed their service. The Carrier Dove, 98 Fed. Rep. (U. S.) 313.

Demurrage.—Where, after a cargo was loaded, the master refused to sign the bill of lading presented by the charterer, on the ground that it was incorrect, but, after several days' delay, altered, and signed the same, the charterer cannot be charged with demurrage for the time so taken. The Assyria, 98 Fed. Rep. (U. S.) 316.

Work on Sundays.—Seamen who are required to work on Sunday in discharging the vessel because the port is open and without facilities, and the work can only be done in calm weather, are entitled to extra pay; such work not being required because of peril to the ship, but to save possible expense incident to delays. The Carrier Dove, 98 Fed. Rep. (U. S.) 313.

Computation of Lay Days.—Where a charter party provided that a cargo of lumber should be loaded by the charterer, and should be "furnished" at the average rate of 50,000 superficial feet per running day, the lay days for loading are to be computed on the amount actually loaded, and not upon the amount delivered to the vessel for loading, a part of which was not actually loaded. The Assyria, 98 Fed. Rep. (U. S.) 316.

Shipping—Construction of Charter Party—Commencement of Lay Days.—The object of providing in a charter party for one clear day after notice of the readiness of the vessel to receive cargo before the lay days shall commence is to allow the charterer such time for preparation, and, unless made so by the terms of the charter or custom of the port, Sunday is not to be counted, the lay days do not commence until Tuesday. The Assyria, 98 Fed. Rep. (U. S.) 316.

Salvage—Amount of Award—Review on Appeal.—Under section 11, Act March 3, 1891, creating the circuit courts of appeals, such courts are governed, in reviewing decrees in admiralty, by the provisions of law then in force and applicable to such review by the supreme court; and under Act Feb. 16, 1875 (18 Stat. c. 77), restricting such review to matters of law, a decree for salvage services cannot be altered, for the reason that the amount awarded is excessive, unless the excess is so great that upon any reasonable review of the facts found, the award cannot be justified by the rules of law applicable to the case. The Trefusis, 98 Fed. Rep. (U. S.) 314.

Fight Between Passengers—Where two passengers on defendant's boat engaged in a quarrel over a game of cards, which ultimately resulted in a shooting which injured plaintiff, an innocent third party, evidence that the game was for money, and that gambling was prohibited on the boat by defendant's rules, was not admissible, though the captain may have had knowledge that the rule was being violated, as it could not be said that the shooting was a necessary or probable result of the gambling. Tall vs. Baltimore Steam Packet Co., 44 At. Rep. (Md.) 1007.

Injury of Passenger by Assault of Fellow Passenger.—Where two passengers of defendant's boat engaged in a quarrel while the captain was in the same room, and one of them withdrew from the room, and there was no reasonable ground to believe that he would return to use a deadly weapon, and he did return with a pistol, and attacked his adversary, and the captain, on being apprised of the resumption of the difficulty, immediately interposed, before a blow was struck, and did all in his power to stop the difficulty, but the pistol was fired and injured another passenger, defendant was not liable for such injury, since a carrier does not insure the absolute safety of a passenger against assaults of a fellow passenger, but is only required to use all available means to prevent such injury. Tall vs. Baltimore Steam Packet Co., 44 At. Rep. (Md.) 1007.

STATISTICAL STATEMENT SHOWING EAST AND WEST BOUND COMMERCE PASSING CANALS AT SAULT STE. MARIE, MICHIGAN AND ONTARIO, FOR THE SEASON OF 1899.

EAST BOUND.

Items	U. S. Canal	Can. Canal	Total
Copper, net tons	115,643	4,447	120,090
Grain, bushels	28,326,850	1,628,585	29,955,435
Building stone, net tons	38,863	200	39,063
Flour, barrels	6,112,638	999,584	7,112,222
Iron Ore, net tons	13,653,225	1,675,015	15,328,240
Iron, Pig, net tons	22,235	1,240	23,475
Lumber, M feet B M	1,024,675	13,382	1,038,057
Silver Ore, net tons	487	.....	487
Wheat, bushels	45,542,364	12,854,971	58,397,335
Gen'l Merch'dse, net tons	90,427	31,563	121,990
Passengers, number	15,350	8,435	23,785

WEST BOUND.

Coal, Hard, net tons	732,213	109,068	841,281
Coal, Soft, net tons	543,397	556,209	3,099,666
Flour, barrels	375	1,550	1,925
Grain, bushels	15,000	30,500	45,500
Manf'td Iron, net tons	187,783	3,327	191,110
Salt, barrels	271,569	44,767	316,336
Gen'l Merch'dse, net tons	418,908	46,586	465,494
Passengers, number,	18,314	6,983	25,297
Freight:			
East Bound, net tons	18,338,253	2,281,281	20,619,534
West Bound, net tons	3,913,886	722,390	4,636,276
Total Freight, net tons	22,252,439	3,003,671	25,255,410
Vessel Passages, number	16,480	3,775	20,255
Reg'd Tonnage, net tons	19,021,489	2,936,858	21,958,347

NOTE.—In addition to above traffic 13,000 cords pulp wood and 2,000,000 feet pine logs passed over the rapids, bound for lower lake ports.

* Other important tables in relation to the canal traffic are held over for our next issue.

COMMODORE OF THE PITTSBURG STEAMSHIP COMPANY.

(Biographical Sketch.)

Captain Erastus Day, recently appointed shore manager of the steamers owned by the Pittsburg Steamship Co., may, by virtue of his position, and the use of a naval term, be now known as the commodore of one of the most important lake fleets.

As it is only the active career of the subject of our sketch that we desire to touch upon, we go back to the year 1844 and find the present Capt. Day cook on the schooner H. M. Kinney of Buffalo, Capt. Davidson, and the following year in the same capacity on the schooner John E. Hunt of Cleveland, Capt. William F. Simons.

Graduating from the galley to the deck the three next seasons were passed before the mast in the schooners Josephine, Oswego, Capt. D. W. Sweetland, and the Rip Van Winkle, also hailing from Oswego, and sailed by Capt. William Sweetland; the following year he was second mate of the latter schooner. In 1850-52 he was mate of the Cleveland owned schooner Lavinia, Capt. William F. Simons, and in the succeeding year he took charge of her, thus having served a ten years' apprenticeship to reach a master's position. The next decade was passed in charge of the schooners W. F. Allen, Marquette, Cascade, the bark B. A. Stannard, and the schooner Cascade He then became half owner of the brig Mayflower and sailed her during the season of 1865. Disposing of his interests in the Mayflower he took charge of the ore discharging docks owned by A. B. Stockwell, Cleveland.

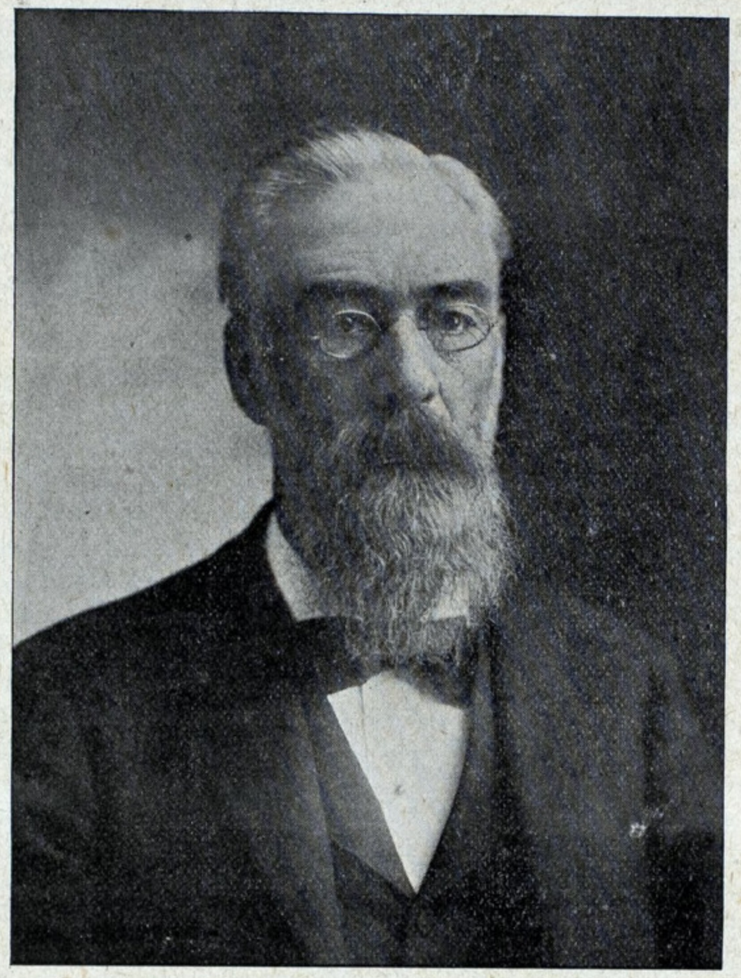
In 1868 Capt. Day leased some water front property and carried on a dockage and commission business quite successfully until 1872, when he added to his personal business the superintendency of the A. & G. W. ore discharging and storage docks.

In 1883 Capt. Day closed up his personal business interests and devoted his attention to the A. & G. W. docks, later known as the N. Y. P. & O. property, where, during the course of his service as superintendent he changed the system of discharging from hand work to steam and machinery, eventually making the docks the best and quickest iron ore discharging point on the lakes.

The Carnegie interests, desiring to make a lake terminal and receiving port at Conneaut, Ohio, the services of Capt. Day were requisitioned, and, in the spring of 1892 he took charge of a shallow, unimproved water frontage as superintendent of docks and machinery; suffice it to say that at the present time Conneaut is a safe port for the largest class of tonnage; the docks are built in a permanent and sightly manner, equipped with the most modern machinery for loading and discharging cargoes with every possible facility for the convenient and rapid handling of vessels.

The above named firm having acquired a fleet of large vessels, it was found in order to appoint a marine superintendent, and, in looking the field over, Capt. Day was named as commodore of the fleet on February 1st of this year with offices at Cleveland. It is also perfectly accurate to state that his many life-long friends are pleased to have him daily among them again.

While engaged in an active, successful and financially prosperous business career for half a century, Capt. Day by no meaus neglected the social part of life, as naturally follows when we state that he is a 32nd degree Mason, which comprises Bigelow Lodge, Webb Chapter, Cleveland Council, Holyrood Commandery and Al Koran Temple.



CAPT. ERASTUS DAY.

OFFICERS APPOINTED FOR THE SEASON OF 1900.

(OFFICIAL LIST, AS SUBMITTED TO THE RECORD BY OWNERS AND MANAGERS.)

MITCHELL & CO., Cleveland.—Str. W. E. Reis, Capt. C. B. Galton; Eng. Wm. Fetting. H. C. Frick, Capt. S. Stratton; Eng. Peter Lavely. M. A. Hanna, Capt. M. P. Parsons; Eng. Wm. Fritz. H. S. Holden, Capt. Fred. D. Galton; Eng. Gus Gey. Lagonda, Capt. R. C. Jackson; Eng. Irwin Francombe. J. J. McWilliams, Capt. B. D. Townsend; Eng. F. Parker. R. L. Fryer, Capt. H. H. Townsend; Eng. Thos. Ward. John Mitchell, Capt. Alex. Begg; Eng. J. D. Riley. Geo. T. Hope, Capt. John Baird, Eng. Louis Minnie.

REPUBLIC IRON CO., Cleveland.—Str. Republic, Capt. Wm. McGarvey; Eng. Wm. Lowe. Specular, Capt. Edward Mooney; Eng. John Smith. Continental, Capt. W. A. Black; Eng. A. McGregor. Schr. Magnetic, Capt. Harry Rogers. Grace Holland, Capt. B. M. Landfair.

DETROIT & CLEVELAND NAVIGATION CO.—Str. City of Detroit, Capt. A. J. McKay; Eng. Wm. S. Huff. City of Cleveland, Capt. A. McLachlan; Eng. Jas. Middleton. City of Alpena, Capt. M. Lightbody; Eng. A. Phillips. City of Mackinac, Capt. H. J. Slyfield; Eng. Wm. McDonald. City of the Straits, Capt. D. McLachlan; Eng. John Sargent.

PERE MARQUETTE RAILROAD CO., Ludington.—Str. F. & P. M. No. 2, Capt. Wm. Barnett; Eng. Geo. Depuy. F. & P. M. No. 3, Capt. P. A. Dority; Eng Robt. McLaren. F. & P. M. No. 4, Capt. Jos. Russell; Eng. Finlay McLaren. F. & P. M. No. 5, Capt. John J. Doyle; Eng. Hy. Nyland. Pere Marquette, Capt. Peter Kilty; Eng. Robt. Bruce. Muskegon, Capt. G. L. Thompson; Eng. Wm. Elliott.

THE THOMSON LINE, C. & O. T. Co., St. Clair, Mich. —Str. Pilgrim, Capt. E. Hayward; Eng. P. Robertson. Douglas, Capt. F. J. Meno; Eng. Jas. Meno.

VESSELS CONTROLLED IN THE OFFICE OF THE CLEVELAND-CLIFFS IRON CO., Cleveland, O.; J. H. Sheadle, Manager.—THE CLEVELAND-CLIFFS IRON CO.—Str. Pontiac, Capt. S. A. Lyons; Eng. T. B. Kelley. Cadillac, Capt. H. H. Parsons; Eng. J. B. Hart. Frontenac, Capt. Geo. A. Symes; Eng. T. J. Rees. Andaste, Capt. C. E. Sayre; Eng. E. A. Carter. Choctaw, Capt. J. M. Johnston; Eng. Thos. Blaine. Pioneer, Capt. A. W. Stalker; Eng. Thos. Durkin. Schr. Chattanooga, Capt. A. C. Reimers. HOPKINS STEAMSHIP CO.—Str. Centurion, Capt. David Hutcheson; Eng. Thos. Welsh. THE PRESQUE ISLE TRANSPORTATION CO. —Str. Presque Isle, Capt. Jas. B. Lowe; Eng. E. I. Jenkins. Str. Angeline, Capt. S. N. Murphy; Eng. E. V. Barry. ST. CLAIR STEAMSHIP CO.—Str. Caliyuga, Capt. G. D. Tulian; Eng. James Bennett. Schr. Fontana, Capt. G. A. McCoy. WM. G. MATHER, MANAGING OWNER.—Str. Edw. S. Pease, Capt. T. E. Murray; Eng. John J. Booth. Schr. Planet, Capt. Frank Parsson.

W. E. RICE, Port Huron.—Str. Rhoda Stewart, Capt. Wm. J. Cowles; Eng. Gill McLelland. Barge Wm. Brake, Capt. Fred. Kirker. Golden Rule, Capt. Chas. Recor. Magnet, Capt. Geo. J. Bennett.

C. D. WATERMAN, Detroit.—Str. S. J. Macy, Capt. M. W. Gotham; Eng. W. F. Gregory. Barge Mabel Wilson, Capt. J. E. Gotham.

CHARLEVOIX LUMBER CO., Charlevoix, Mich.—Str. Pine Lake, Capt. Herman Oertling, Jr.; Eng. Jno. Charmock.

STEWART TRANSPORTATION CO., Detroit.—Str. C. F. Bielman, Capt. Fred. Stewart; Eng. Robert Lacey.

ASHLEY & DUSTIN, Detroit.—Str. Frank E. Kirby, Capt. A. J. Fox; Eng. H. Lewis.

THE ST. LAWRENCE & CHICAGO STEAM NAVIGATION CO., LTD., TORONTO.—Str. Algonquin, Capt. James McMaugh; Eng. James H. Ellis. Rosedale, Capt. James Ewart; Eng. Edward O'Dell.

THE MCLACHLAN TRANS. CO., Port Huron.—Str. Kittie M. Forbes, Capt. James W. Montgomery; Eng. A. L. Hatch. Schr. Mary E. McLachlan, Capt. Geo. B. Fuller.

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CONTINUED ON PAGE 11.

MARINE RECORD

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CLEVELAND, O., FEBRUARY 15, 1900.

AT LAST the Board of Supervising Inspectors of Steamboats recognize that the steamer which has the other on her own starboard side must give way, at least, in the Atlantic and Pacific coast inland waters.

NAVAL-MILITIA is in common, ordinary shore parlance sailor-soldier. Anything unsailorlike is soldierly. Naval reserves are a naval auxiliary, not militiamen—rather, the opposite arm when in actual service. The State militia identifies itself with the Army, Naval Reserves with the Navy.

A DAM at Niagara is the entering wedge for lock gates at a dozen other places on the lakes. If Lake Michigan is to take the supply from the lower lakes, it will be necessary to span the Straits of Mackinac, so as to regulate the flow to Michigan's natural supply. The span across the Straits might be pierced in several places with lock gates.

FROM his report before the River and Harbor Committee on Wednesday, Mr. George Y. Wisner, C. E., Detroit, is a strong advocate of the project to build a dam near Buffalo so as to maintain the level of Lake Erie. Major Symons, Corps of Engineers, U. S. A., stationed at Buffalo, advises the most careful consideration of the matter before any steps are taken, and the majority of interests are at one with Major Symons.

PREPARATIONS are now completed by the Weather Bureau for the issuance of ice reports from all lake stations. The exact state of the ice at all harbors, as well as at the connecting links of the chain of lakes, will be given for any day up to the opening of navigation. It is likely that the service will be further enhanced by giving out ice reports in the fall of the year also, thereby rendering a boon to all special lake interests and the general commerce.

IT WAS thought to be rather good work for the ice crusher and car ferry Algomah to get through 24 inches of ice this week on her passage from Sturgeon Bay to Menominee, although it must be said that the windrows showed 5 to 8 feet thick in places. The late new Russian ice crusher Ermack has made a speed of ten knots an hour through ice two feet thick, and, on one occasion encountered a pack which was found to be of a total thickness of 34 feet, 9 feet being above the level of the field through which she successfully forced her way. It is expected that the Ermack will succeed in keeping the Gulf of Finland and the Baltic open for winter navigation to St. Petersburg, which leads us to mention that the construction of ice breaking craft is still in its infancy on the lakes. The first ice breaking experience is credited to the Britannia, of the Cunard Line at Boston, Mass., in 1844.

RELATIVE to the licenses of steamboat officers and the complaints about these pieces of paper falling into wrong hands, etc., we would suggest that the Supervising Inspectors instruct their locals to issue duplicate forms and frames for hanging up on exhibition aboard of all boats, the other and original, to be held by the owner thereof. The steamboat inspection service is always looking for ridiculous innovations and will do nothing right until forced to do so by public clamor, otherwise, a form could be devised embodying the names and talent of those engaged in pushing a craft along without original licenses being displayed so as to tempt the dishonest to steal. Officers would do well, during their winter session, to consider if the certificates they have gained through a voluntary examination does not belong solely to themselves as individuals, and refuse to part with their well, or otherwise, earned honors. A man's license is his own as long as he legally holds it, nor can he be held responsible for its safe keeping when the law compels him to publicly exhibit it under a piece of glass and place it out of his reach for months at a time. This feature is more especially reprehensible in the passenger and excursion trade where there are so many different sorts of people mauling and examining the light and insecure license frames. A ship builder, manager or owner could well refuse to go to the expense of finding a receptacle for these license forms, and licensed officers could in all conscience demand, that when their certificates were compulsorily taken from them, they should at least be placed in a position of ordinary security, as in the event of theft, slight fire, or other ordinary casualty it is found to be considerable of a nuisance and waste of important time to procure duplicate issues of the license form. Finally, giving the licensed officers of the United States mercantile marine the benefit of the doubt as to their capability, honesty, etc., let those who steal or are in wrongful possession of licenses be punished, but don't keep the penitentiary hanging over the heads of a class of men who are the equal of their compeers in any line of bread-winning exercised in the universe.

NOW that so many large steamers are tied up for the season in the iron ore trade, it would be well for their owners, managers or ship-husbands, notwithstanding the deeper water bottoms of the latest built boats, to consider the advisability of placing temporary wooden bottoms or platforms, say six feet higher than the tank tops, so as to ease the hulls and facilitate discharging of cargoes in the ore trade. This is not a new idea, nor is it by any means original with the RECORD. It is a well tried custom in other iron ore carrying trades and only needs to be mentioned here to be adopted in lake vessels where iron ore is carried exclusively, or almost so. Vessels built ten years ago and used in the iron ore trade would have saved large amounts of money in strengthening and repair bills if they had adopted the platform custom as presented in the RECORD at that time. With the 500-foot class of boats there is now more reason than ever for its adoption, although it is not to be thought that shipbuilders, dry-dock owners, repairers or surveyors would be enthusiastic in their praise of such an innovation on the lakes, rather does it more nearly and directly concern the owners and underwriters.

IT IS a favorite expression when making sailing and steering rules for steamers, to use the word "running," as for instance, "when steamers are running in a fog." Now, the remark is pertinent from a windjammer's standpoint, why give steamers a fair wind always? (unless it's a fidley wind) nothing can run without the wind being abaft the beam at least; why not give steamers a head wind sometimes, or let the wind be on either side occasionally in a natural sort of way. The action of the propeller may cause a steamer to steam against a head wind, just as the same agency can put her ashore, but it is not shipshape parlance to be running against a head wind, nor is it usually done either in sail or steam. Those who never had to "up stick and run" are a good deal like Patsy working at decimals, viz: a "beauty" at it.

WE are this week in receipt of a copy of the "Annual Report of the Light-House Board" for the fiscal year ended June 30, 1899. The executive members of the Board are Rear-Admiral Francis J. Higginson, U. S. Navy, Chairman; Commander Thomas Perry, U. S. Navy, Naval Secretary; and Major Richard L. Hoxie, Corps of Engineers, U. S. Army, Engineer Secretary. Hon. Lyman J. Gage, Secretary of the Treasury, is ex-officio President. The entire Board consists of eight members taken from the Army, Navy and Coast Survey Departments.

IT would appear, and, in fact, the question has been brought up now and again during the past several years, that the salaries of light-house keepers and their assistants are miserably below par. A lake correspondent writing us this week says: "I learn from the Port Huron news in last week's MARINE RECORD that the salaries of light-keepers average $600 per year. This is rather deceiving, as the first assistant keeper averages only $450 and the second assistants $425 per year, out of which uniforms must be purchased, and yet they are all light-keepers and held personally responsible for carrying out their duties punctually and in due order." In this connection we can but say that the executive officers of the Light-House Board, annually and invariably, for the past few years, have asked Congress for a more liberal appropriation to pay the salaries of light-keepers. Last year the Board's request for salary appropriation was cut down $100,000, and this, too, in the face of the Secretary of the Treasury being ex-officio president of the Light-House Board. The RECORD is pleased to state that Senator McMillan, of Michigan, also Congressmen from that state, are interesting themselves in a re-classification of the salaries of light-house keepers, and with the assistance of other legislators, we hope that the appropriation requests of the Light-House Board will meet with more favor and attention in Congress, so that a very excellent class of men may be furnished with an adequate stipend in return for their trustworthiness and very important services to the water-borne commerce of the country.

As each season comes around, new and younger men are entering the field of lake transportation and vessel owning interests. These men are not apt to forget, or to remember what they never heard of, it therefore behooves those who were and are in the business to keep in mind the promised and projected Poe memorial to be placed at St. Mary's Falls Canal. The late General O. M. Poe, Corps of Engineers, U. S. A., accomplished more work for the benefit of lake transportation and general marine interests, both in his official and unofficial capacity, than any one individual in any way connected with the lakes. Last season was a good one for all marine interests; the coming one is expected to be still better; now, a long, strong pull altogether and a fitting memorial of merit will adorn the gateway to Lake Superior by the time snow flies next fall. Among others, the Rockefeller, Carnegie, Hanna and half a dozen similar immensely influential interests are concerned in this gracious acknowledgement and merited tribute to one of the best friends that the lakes ever had. There seems a certain amount of inertia waiting to be overcome, also a susceptibility of dilatoriness, but the accusation of ingratitude can never be laid at the doors (or as a consideration of their bank account,) of the earnest, affluent and energetic men carrying on the transportation adventures, with which is closely allied the mining and manufacturing interests engaged in the traffic of the lakes and principally that of Superior.

IT is a small matter for the Light-House Board to seek to adjust the pay of mates on light-house tenders, one or two of which only are on the lakes. A wide, liberal, inclusive and comprehensive measure should be drawn up so that the salaries of the actual light-keepers and their assistants could be re-classified. The Lake Carriers' Association pay light-keepers according to their services; the paring down of the salary appropriation for light-keepers by the Federal government is picayunish, to say the least. The light-house service, in its admistrative and executive branches, is one of the best departments in the country, and Congress should at least vote adequate compensation for its proper up-keep, as evidenced by the splendid services rendered the government by its coast guardians of commerce, life and property, through the always alert and trustworthy light-house and light-ship keepers.

THE Merchant Marine shipping bill has been discussed in the House Committee on Merchant Marine and Fisheries. but no definite action taken. It is understood that the Frye amendment may be incorporated in the bill. This amendment makes provision for the subsidizing of slow cargo steamers of prescribed capacity, and is intended to meet objections which have come from certain quarters that only the ocean greyhounds would share in the benefits of the law. It is thought that the bill will be discussed at two or three more sessions before final action is taken by the committee, The indications point to a favorable report, but the concensus of opinion still seems to be that no action will be taken by the House at this session of Congress. The prospects of its passage by the Senate, however, seems to be more promising.

THE thanks of the RECORD are due the Chief of Bureau of Navigation, Navy Department, for a copy of "Notes on Naval Progress," issued from the office of Naval Intelligence, of which Commander Richardson Glover, U. S. N., is chief officer. When chief of the Hydrographic Office, Commander Glover's pilot charts and other departmental literature were always of the highest order and interest, and his attributes have apparently been accelerated by his detail of service in the Office of Naval Intelligence, as this issue of "Notes" is one of the most complete in contents, up to date typographically, and edited in an able manner throughout.

IF there is any one individual or authority better versed than another in the method of coast lighting and the best system of apparatus used for that purpose, commend us to Lieut. Col. D. P. Heap, Corps of Engineers, U. S. A., Engineer in charge of the Third District, and stationed at Tompkinsville, N. Y. French engineers have been closely studying all sorts of apparatus for coast lighting and are exceedingly scientific in arriving at results, etc., but, as we have said, Lieut. Col. Heap can discount the savants of France in this specialty.

PRECEPITATION, evaporation and artificial waste are the ruling factors in the levels of the lakes. The latter term includes the immensely increasing volume used at lake ports for all purposes. Natures abhors a vacuum, there is no waste in the universe, etc., but, given another miniature Niagara like the Chicago drainage canal, and waste will be a more potent factor than evaporation ever was, or, in other words, artificial means for drawing off water from the lakes will discount natural influences.

LIGHT-HOUSE KEEPERS.

We are glad to know that so powerful a paper as the MARINE RECORD, of Cleveland, Ohio, agrees with the News as to the payment of better salaries for light-house keepers, assistants, etc. Commenting on our article of Jan. 26, the RECORD says as follows :

"THE MARINE RECORD heartily endorses the foregoing suggestion. So, for that matter has the Light-House Board and its succeeding officers from term to term. The heads of the service, including naval officers detailed to light-house duty as inspectors, etc., receive their regular pay, but the keepers have been relegated to the realms of departmental obscurity and have no friends at court or champion in the halls of legislation. THE RECORD has frequently set forth the claims of light keepers for a fairer salary, but some time ago we arrived at the conclusion that since the class, as a whole, was not a factor in the field of politics, Congressmen could easily and cheerfully ignore their just claims on the Federal Government. Senators and Congressmen have taken up the cudgels in behalf of other departmental employes, but the light-house keepers have been and are still waiting for their savior."

We are pleased to inform the RECORD that Senator McMillan, of this state, has promised to take the matter up, and when he does, the light-keepers can depend on a savior who will get what he goes after.

The railway mail clerks complain although receiving an average salary of $1,000 a year, and through their powerful organization are now striving at Washington to make the average $1,200.

In this State there are nearly 300 light keepers and assistants, some located on barren rocks in mid-lake, some swing to the waves in light-ships and others on islands and solitary points, hardly a day but the majority are in danger, though they are ever ready to risk their lives to save others. Of these 300 light-house employees in Michigan, we believe, with facts to sustain the belief, that their average yearly salary does not amount to over $400.

Why shouldn't the light-house employees ask for better salaries when what they now receive barely supports their families.—News, Port Austin, Mich.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 9TH DIST.,
CHICAGO, ILL., February 9, 1900.

CLOSING OF LIGHTS FOR THE WINTER.

Notice is hereby given that the Old Mackinac Point and Seul Choix Pointe light and fog-signal stations, Michigan, have been closed for the winter.

By order of the Light-House Board.

F. M. SYMONDS,
Commander, U. S. N.
Inspector 9th Light-House District.

ANTARCTIC STEAMER.

The plans and details are now published of the vessel which is being built at Kiel for the German Antarctic expedition. The ship in question will be built of wood, the only material strong and elastic enough to resist the pressure of the ice. In form she will be somewhat rounder than the Fram and will not fall away towards the keel in the same manner. In order to strengthen the ship against the pressure of the ice the middle deck will be built very nearly on the level of the water line. Protection against floating ice will be afforded by a triple coating of oak, pitch pine and South African greenwood, and the bow and stern will be especially protected by steel bands. The length of the ship will be about 46 meters, the breadth between 10 and 11 meters and the draft about 5 meters. She will be constructed to carry coal and other stores sufficient for three years, and will contain accomodation for five scientific observers, five officers and a crew of about twenty men. The engine and boiler will be placed in the stern, between the living rooms. The center of the ship will be occupied by the rooms for scientific work and the forecastle will contain space for fifty Arctic dogs. The ship will be rigged as a three-masted schooner. Two steam winches will serve for working the anchor and will also be used for scientific purposes. The ship will be illuminated throughout with electric light.—The Nautical Gazette, New York.

LAKE LEVELS.

Referring to our remarks in last issue on the subject of St. Lawrence levels, the Engineering News, New York, says : "Our contemporary is needlessly alarmed." The fact remains, however, that the situation is serious and that the outflow at Chicago by the canal will injure Canadian shipping enormously. The United States interests on the upper lakes may be protected by a dam on the Niagara river as recommended some time ago by the commission, and by a new Erie canal as resolved on by Gov. Roosevelt's commission in the past few days, but these measures will not help the St. Lawrence canals, they will make their maintenance a matter of purely Canadian interest, and it is necessary that public opinion should be educated on this important question. The Montreal Witness had an editorial under the head "Stolen Waters," recently, which takes a commendable position on this subject. The Engineering News in discussing the question refers to the capacity of the canal as "300,000 cu. ft. per second." This passing through a canal having a section 161x22 ft. would move at the rate of a mile a minute and the total flow per annum would equal the area of Lake Erie with a depth of say 35⅓ inches. Taking our contemporary's own figures we need not be alarmed about the St. Lawrence levels, as there would be no St. Lawrence under those circumstances.—The Canadian Engineer, Toronto and Montreal.

THE Advocate, Sturgeon Bay, Wis., desires the Uhler bill passed and wants Congress to fine a man $500 or suffer 3 years imprisonment for making an inexact statement on taking his voluntary examination before local steamboat inspectors to obtain a certificate as a licensed officer. The Advocate is unusually correct in its marine views, but it's the fellow wrongfully holding the license that ought to be proceeded against and not the bona fide owner thereof, taking it for granted, as a matter of course, that local inspectors have some knowledge of the ability or efficiency of those to whom they hand out these printed forms.

THE available funds for river and harbor work on the lakes, is away along in the millions, not to mention the projects being carried out under the continuing contract system. The minor ports should find out the amount of unexpended appropriations on their work before starting to grumble at the non-appearance of a river and harbor bill at this session of Congress.

The London (England) School Board has a training ship for reclaiming the offshoots of criminal classes by turning them into sailors. This ship is called the Shaftesbury and she is very elaborately kept up, but according to latest statistics, the work does not appear to be eminently successful. It is stated that out of 115 boys sent to sea in 1897 and 1898 only 30, all told, were known to have remained at sea up to the date of the report. Fifteen potential sailors per annum out of an average yearly entry of over 180 boys !

WATER LEVELS OF THE GREAT LAKES AND PROPOSED INTERNATIONAL COMMISSION TO CONSIDER AND DEAL WITH THE PROBLEM OF THEIR MAINTENANCE.

A representative committee, members of the Lake Carriers' Association, accompanied by Harvey D. Goulder, Esq., counsel for the Association, are on a visit to Washington this week in accordance with the views expressed, and recommendations made by President Frank J. Firth and the Board of Managers of the Association at their annual meeting held in Detroit last January, and which we herewith publish for the more general and better understanding of the subject.

"One of the most interesting and important questions relating to the matter of the lake traffic which has come to the front during the past twelve months, is the question of a proper method of maintaining the water levels on various lakes. The question is not a new one, but various recent events have served to bring it into great prominence, and it is now for the first time receiving the public attention which its importance deserves. On the 15th of July last President Firth, of the association, addressed a letter to THE MARINE RECORD, published at Cleveland, in which he called attention to the various engineering projects, either actually undertaken or contemplated, along the chain of Great Lakes, affecting the water levels, and pointed out that a very serious mistake was being made in assuming that comparatively small reductions in the lake levels were of no practical importance. President Firth strongly advocated that the vessel interests which were particularly interested in maintaining and if possible, increasing the lake levels, should advocate and obtain the appointment of an international commission of United States and Canadian engineers, whose duty it should be to investigate carefully the entire question, recommending to their respective governments a permanent policy to protect the interest of lake navigators, without needlessly restricting important private enterprises desiring to utilize for power or other purposes the waters of the Great Lakes. The attention of President Firth was especially called to this question during the early part of his term of service as President of the association by the power canal project at the Sault. Correspondence between the President of the Lake Carriers' Association and the officers of the Sault Power Canal Company removed to a large extent the apprehension that the President had that the project of the Canal Company might materially affect the water levels in Lake Superior and the upper St. Mary's river. Assurances were given by the Power Company that they were as much interested in maintaining the present levels in Lake Superior as the vessels, and that their plans called for structures in the unnavigable part of the St. Mary's river, which would compensate fully for the draft of water from Lake Superior through the power canal. A few weeks later it was reported in the public press that a company had been formed with suitable backing to construct a canal from Lake St. Clair to Lake Erie, and this again raised the question of a possible lowering of the levels of Lake St. Clair and the Detroit river. At the present time the power projects of Niagara seem to have little to do with the maintenance of lake levels, as the water is taken away from and returned to the river in unnavigable parts of the stream. The whole question of lake levels has, however, been again brought into prominence by the proposal of the Deep Waterways Commission to maintain the level of Lake Erie by the construction of a partial dam at or near the head of the Niagara river. The purpose of this dam being to secure the deepening of the various harbors on Lake Erie and also the deepening of the shallow channels near the mouth of the Detroit river. President Firth's letter to the MARINE RECORD has called forth a large number of replies and has shown a general disposition on the part of students of this question to approve his recommendation that the subject is of such importance that it should be taken up by an international commission. Able engineers, thoroughly acquainted with the whole problem of navigation on the lakes, have approved Mr. Firth's suggestion. The President recommends that the various articles approving this plan should be collected and published in pamphlet form by the association for use in Congress and in spreading general information from expert sources on this subject. The Lake Carriers' Association could, in our judgment, do no more useful work than to bring about a scientific consideration of this question and satisfactory solution. It is quite clear that the various departments of the government are fully alive to its importance."

President Firth's suggestion relative to these articles being published in pamphlet form has been duly carried out and a number of copies sent to Washington for circulation in Congress. A committee of the Lake Carriers' Association, appointed to suggest certain improvements of the channels of St. Mary's River, will also take that matter up with the River and Harbor Committee while in Washington.

VESSELS CLASSED.

Vessels classed and rated in the Record of American and Foreign Shipping, this week, by the American Bureau of Shipping, New York: Screw, Augusta, owned by the Chesapeake Steamship Co.; screw yacht, Dreamer; barge, Powell; British screw, Bermuda; and British schooner, Congo.

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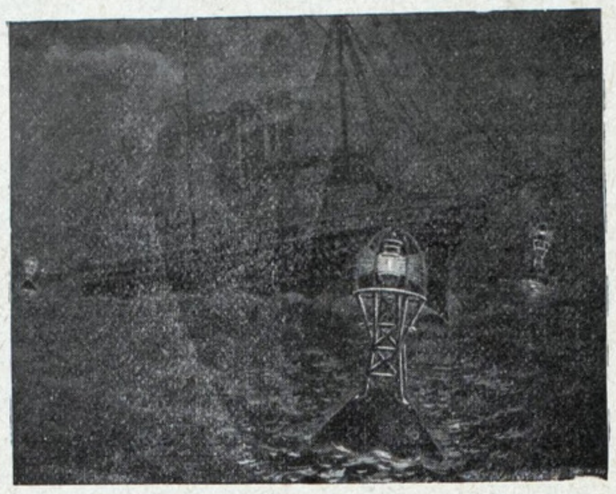

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THE WORK OF A CARELESS ENGINEER.

On December 11th, 1899, the U. S. Local Inspectors of Steam Vessels in New York investigated the burning of a water tube boiler on the tug William H. Beard September 13th, 1899.

This is a small tug of 28.49 gross tons, employed by the W. H. Beard Dredging Co. in towing their mud scows. She was supplied with a Boyer patent sectional water tube boiler in the spring of 1898, which continuously gave satisfaction. Soft coal was the fuel used.

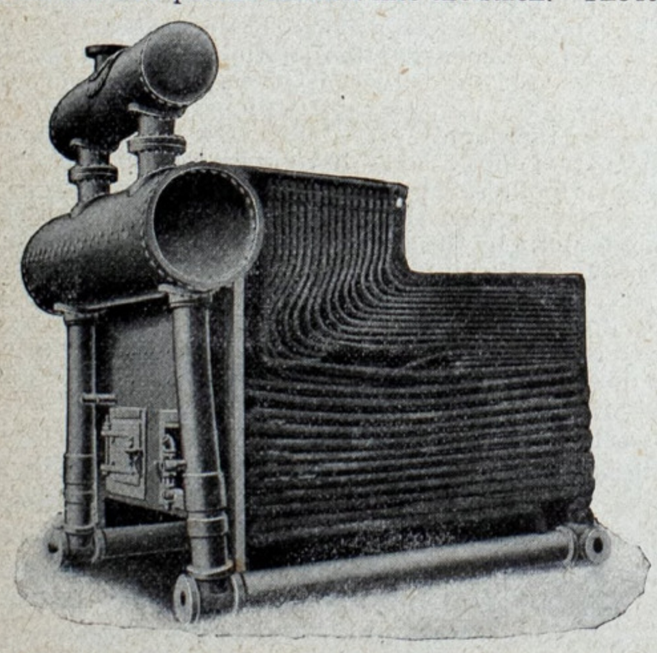
The testimony shows that on the night of the 12th the permanent engineer, Mr. Stiglin, closed the connections between the gauge glass and boiler, as was his custom. That on the morning of 13th, he was sick and employed Engineer * * * * to take his place for the day. That shortly before 7 o'clock on the morning of Sept. 13th, 1899, the tug left her berth for the day's work and had several tows. That while towing a large loaded scow against the tide, the accident occurred, shortly before 1 o'clock.

The day after the accident, the gauge glass was noticed with three or four inches of water and the boiler connections closed.

The witnesses describe the various points as follows:

Engineer H. Steglin—The boiler was supplied with water by force pumps attached to the engine and an injector. The force pumps were sufficient to supply the boiler at all times except when the tug's engine was at rest, when the injector was used. The engine never lifted the water except when first starting out in the morning, at which time the gauge glass was full and above the upper gauge cock. I was with Engineer * * * * until nearly 7 o'clock, when I went home and to bed.

Engineer * * * *—We were towing a large loaded scow against the tide with the steam at 140 lbs. I opened the cock of the air chamber; the check was working all the time. After blowing off the air chamber cock, my steam began to come down. The connection with the tank was open and the check was cold. I jumped down into the fireroom, put on fresh coal and put the exhaust into the stack. The steam



was then at 110 and a pretty fire. The pump check was working all the time. The tug began to plunge heavily, caused by the swell from some passing steamer. I received a signal to slow and tried to work the injector; it would not force the water into the boiler. I immediately drew the fires and had drawn several hoes full, when I noticed something was dropping down. There was no hissing or blowing of water or steam.

Superintendent W. H. Arnold, of the W. H. Beard Dredging Co., says—I was notified and reached the tug an hour and a quarter after the accident. I went below at once and found the greater portion of the boiler melted down on the grate bars. It was so hot that I could hardly stay in the fire-room; it was still red-hot. I have often examined the boiler and found the tubes above the fire in fairly good condition, being probably one-quarter of an inch off the horizontal. I have never received any report from the engineer that the feed pumps did not work properly or that the water was not freely supplied, even when I asked him.

Mr. James Kaine, of L. Boyer's Sons, says—I visited the Beard on the morning after the accident, accompanied by Messrs. Munkenbeck and F. W. Boyer. I noticed that there was between three and four inches of water in the gauge glass, and trying the connections to the boiler, found them closed. I called the attention of Messrs. Munkenbeck and Boyer to this.

Mr. Munkenbeck verified this statement.

The testimony of Messrs. Kaine and Munkenbeck was directly opposite to that of the engineers, who both claimed that they tried the connections and that they were open. The local inspectors evidently accepted the version of Messrs. Kaine and Munkenbeck, as their report indicates:

STEAM VESSEL INSPECTION SERVICE,
OFFICE OF LOCAL INSPECTORS.
NEW YORK, December 29, 1899.

GEORGE H. STARBUCK, ESQ.,

Supervising Inspector, Second District, New York, N. Y.

SIR:—We have the honor to report that this Board held an investigation at this office on December 11th, 1899, in the matter of the burning of the pipe boiler on the tug Wm. H. Beard on the 13th day of September, 1899.

We have carefully read over the evidence in this case and are of the opinion that the engineer * * * * was to blame for the burning of said boiler, and we therefore reduce his grade of license from assistant engineer in charge of condensing tug and freight steamers of 75 gross tons to that of "an assistant engineer," as per authority conferred on us by Section 441 of the Revised Statutes of the United States.

Respectfully yours,
[SIGNED] THOMAS H. BARRETT,
PETER C. PETRIE,
Local Inspectors.

An examination of the melted boiler shows that the tubes are free and the circulation not impeded, that the tubes on the inside and on the outside are coated with black oxide of iron, and that the greatest heat was amongst the tubes. Also, of the 785 evaporating tubes, over 300 were melted. Black oxide of iron has the appearance of plumbago and is made by passing of oxygen gas over red-hot iron.

From the condition of the boiler and the above evidence, the following conclusions are inevitable:

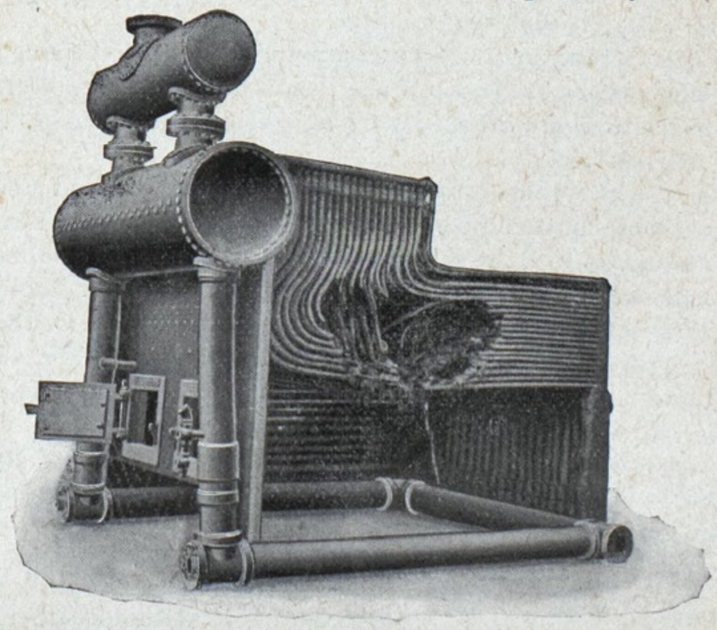
First—That by reasons of the connections between the boiler and the gauge glass being closed, the engineer did not know where his water level was, and that it had been materially lowered during the hour and one-half while lying still before towing the large scow; also, that the towing of the big loaded scow against the tide was hard work for the little boat, and that there was an unusual consumption of water. Thus the upper evaporating tubes became empty of water, and when the exhaust was put into the stack, they became superheated and then red-hot, at which time the steam was decomposed into oxygen and hydrogen gases. These gases were released by a split in some of the pipes; part of the oxygen combined with the iron formed black oxide of iron, leaving the hydrogen and balance of the oxygen to again combine with different chemical proportions, and thus with the aid of the fire produce the terrific heat that melted the boiler tubes. This was further aided by the air that passed over the fire, the boiler doors being open at the time, and the engineer engaged in hauling the fire. That the heat amongst the tubes must have been terrific, is proved by the fact that they were of wrought iron, a substance almost impossible to bring to a liquid state, and further that, one hour and a quarter after the accident, the fireroom was so hot that Supt. Arnold could hardly stay there.

Second—That if this carelessness had happened to any shell boiler or water tube boiler, wherein the steam drain was accessible to the fire, or the evaporating tubes of large diameter, there would have been the releasing of immense quantities of the gases, resulting in a great explosion, with loss of life and property.

Third—That the Boyer Patent Sectional Water Tube Boiler can be subjected to this abuse and limits its owner's loss only to the repair of the boiler, should make it a favorite with all owners, engineers and firemen.

NOTE.—The first of the accompanying prints shows that the damage was confined entirely to the nest of tubes; the second shows the hole melted into the tubes; and the third a closer view of the melting.

A COMPILATION of the wreck statistics for the fiscal year ended June 30, 1899, shows that New England suffered as never before. The states of Maine, New Hampshire and Massachusetts in that period lost one hundred and sixty-two vessels, valued, with their cargoes, at nearly two million dollars, while three hundred and twenty-five persons perished.



It was the most destructive year in the history of this coast. The greatest losses were in the great gale of November 27, 1898, when many wrecks occurred. The great majority of them were between Vineyard Haven and Highland Light, Cape Cod. In that gale the steamer Portland went down with all hands—one hundred and twenty-nine persons, passengers and crew. Between June and December, 1899, forty-nine more ships, barks and schooners were wrecked, making a total loss for the year and a half of 215 vessels. It is this unprecedented loss, and the consequent scarcity of vessels, which has had a great deal to do with sending coal freight from ninety cents to two dollars a ton.

ORIGINAL OR FIRST LICENSES ISSUED TO CANDIDATES BY THE LOCAL INSPECTORS IN THE SEVERAL LAKE DISTRICTS DURING THE YEAR 1899.

DETROIT, MICH.

Master and Pilot.—Jex, Horatio N.

Masters (Naval Militia).—Hendrie, Strathearn; Joy, Henry B.

First-class Pilots.—Sturgis, Arthur; Ward, Patrick B.

Second-class Pilots.—Anderhalt, Leonard P.; Burrell, Louis S.; Currie, Carlos C.; Ernest, Frank H.; Fox, Chas.; Moore, Edward; McCormick, John S.; McLachlan, Donald; McLean, William J.; McKay, John; Manning, Edwin A.; Monforton, Joseph; McMillan, Hugh; Morrison, Roderick; Rouvel, Walter P.; Smith, Wallace; Schonisen, Peter; Simpson, Fred J.; Tufreson, Nels P.; Tobin, Gordon.

Special Pilots.—Cobb, Julius K.; Graham, Samuel; Rucker, John D.; Rockelman, Andrew; Smith, W. Murray; Sieder, Charles P.

Special Joint Licenses as Pilot and Engineer.—Cheetham, Edward; Meier, Jacob F., Jr.; Robinson, Alfred; Sibley, Mark M.; Scholes, Geo. M.

Chief Engineers.—Doran, John C.; Wells, Joseph P.

First Assistant Engineers.—Armstrong, Arthur; Burdeno, Fred; Carter, Arthur F.; Draper, Geo. H.; Ducharme, Edward; Firby, Harry; Galbraith, Geo.; Humphrey, David W.; Hughes, John; Holder, Fred; Johnson, Chas. L.; Joyce, Allen C.; Jackson, Chas.; Lauder, David W.; McCabe, Bernard; Nolan, William J.; Stuart, John; Stommel, Henry J.; Scott, Allan W.; Smith, Russell C.; Waterman, Albert.

Engineers of Naphtha Vessels.—Johnston, Sidney; Schultz, Chas. L.

Special Engineers.—Borland, Angus; Conway, John J.; Liberty, Antoine; Rogers, Ezra H.

Total number officers licensed, 65.

CLEVELAND, OHIO.

First-class Pilots.—Coutts, James E.; Dyble, Henry J.; Galbraith, William.

Second-class Pilots.—Gilby, George; Mack, John; Ott, Frank H.; Swinton, James C.

Special Pilots.—Barry, Philomon B.; Duggett, Carl R.; McLeod, Norman.

Joint Pilot and Engineer.—Bentley, Stanley J.

Chief Engineer.—Bresnahan, Thomas J.

Engineers licensed for boats of 10 to 100 tons.—Bell, Chas. H.; Foster, Samuel D.; Robbins, Charles M.

First Assistant Engineers.—Anderson, John; Bennett, Jay A.; Benham, Robert H.; Baird, William J.; Cummings, Robert C.; Card, Harley S.; Keefer, Charles D.; Lindsley, Harry A.; McKenzie, James C.; McCallum, Angus; Minor, Stewart T.; McVicker, James M.; Pliske, Emil C. F.; Biebel, Clarence H.; Sutton, John; Scanes, Joseph H.; Tyler, Charles A.

Total number officers licensed, 32.

DULUTH, MINN.

Master of River Steamers.—Durant, E. W.

First-class Pilots.—Case, Harley C; Gallant, George.

Second-class Pilots.—Anderson, Jno.; Berge, Jacob; Clements, Fred J.; Collins, Allen; Ernest, Chas. W.; Green, Arthur T.; Harrington, Edmond; Hart, Peter C.; Hayden, Albert W.; Head, Charles D.; Jeffery, William H.; Lowry, William; McGillivray, John; McKenzie, John; Parsons, Edward J.; Patterson, Cecil; Smades, Harry E.; Stevenson, Thomas; Sullivan, Frank; Winter, Fred.

Special Pilot.—Bailey, Samuel W.

Joint Pilots and Engineers.—Barton, J. R.; Jefferson, Rufus W.; Power, George W.; Trauernicht, Wm.; Vincent, George E.; Zopp, George.

Second Assistant Engineer of 100 tons and under, and over 10 tons.—McLean, Daniel.

First Assistant Engineers.—Adams, John Q.; Allen, Geo.; Gagnon, Frank; Johnson, Neils J.; Scott, Archie; Watts, Robert.

Special Engineers.—Eng, Louis; Oestreich, Henry W.

Masters of Sail Vessels of over 700 gross tons.—Bunting, George; McDonald, William.

Total number officers licensed, 41.

BUFFALO, N. Y.

First-class Pilots.—Mahon, Joseph E.; Miller, Charles F.; Wilson, Charles H.

Second-class Pilots.—Delaney, Albert J.; Jones, William E.; Lennon, Hugh; Lambert, Gust. R.; Murray, John; Myers, Joseph L.; O'Connor, Thomas V.; Reilly, William A.; Starkey, Mark J.

Special Pilots.—Cramer, George H.; English, George W.; Hammond, Clark H.; Lovegrove, William H.; Miller, John J.; Smith, Albert R.; Voetsch, William.

Joint Pilots and Engineers.—De Smith, Henry; Johnson, Henry; Roesch, Louis, Jr.

Chief Engineers.—Dimmers, Charles H.; Dillingham, Ora H.; Healey, Charles W.; Mahoney, Joseph.

Engineers of steamers 100 tons and under, and over 10 tons.—Booth, Albert W.; Bacon, Charles W.; Brigham, Charles; Bailey, Nelson J.; Carroll, William H.; Evans, Charles E.; Fix, Charles V.; Hershey, William; Miltmer, William J.; Mason, Robert; Parish, Wallace; Whelan, Joseph T.

First Assistant Engineers.—Campbell, Donald; Clark, Edward; Davidson, William J.; Greenwood, Walter; Goodwin, Benjamin F.; Hull, Charles; Leahy, Cornelius; Lyall, Alexander; Lynch, John J.; Murphy, Maurice; Moore, John; Miller, Isaac A.; Newman, James; Stamp, Thos. H.; Sweinhart, Frank B.; Schraut, Edward; Wilson, Peter.

Special Engineers—Errick, Frank J.; Forsyth, Nelson; Hammond, Clark H; Oakley, D. F.; Paul, John G.; Plummer, W. Ward; Reinbolt, Charles J.; Rose, George; Weller, Henry. Total number of officers licensed 64.

CHICAGO, ILL.

First Class Pilots.—Patrick, Powell; Parsons, Dudley R.

Second Class Pilots.—Black, Robert James; Jones, Edward P.; Kendall, William A.; Laughlin, William T.; Nilsen, N. T.; Quan, Martin; Van Dyke, W. H.

Special Pilots.—Clark, William G.; Doepp, Albert G.; Mathie, George.

Joint Pilots and Engineers.—Barnum, Thomas; Barnum, William E.; Dayton, Charles M.; Goodrich, A. W.; Peterson, Edward L.; Stein, William F.

Chief Engineer.—Kasson, Mahlon O.

First Assistant Engineers.—Allison, Robert; Whyte, Harry T.

Special Engineers.—Finn, Joseph R.; Flint, George C.; Marlett, M. W.; Mathie, Charles. Total number of officers licensed 25.

MILWAUKEE, WIS.

Master and Pilot.—Fred. Gunderson.

First-class Pilot.—John A. Peterson.

Second-class Pilots.—Joseph Brezinsky, Harry Harrick, Arthur G. Hill, Arthur Jackson, John B. Kearns, Joseph Lague, Lars N. Madsen, Clarence L. Neff, Albert A. Pilon, James A. Robinson, E. L. Shaw, Emil H. Thorsen, George Tryon.

Special Pilots.—Frank Chapek, August V. Koyen, Wm. A. Keys, Charles McDonald, John Stevens, Jr., Adolph Stokdyk, Joseph A. Weber, Jr., Henry O. Warren.

Chief Engineer.—Timothy J. Sheehan

First Assistant Engineers—Martin Christensen, Rudolph Elhamer, Frank C. Ellis, George F. Hebert, James Hooper, Charles M. Hyttel, Frank W. Kelly, James Oliver, John Ryan, John P. Riley, Everette T. Robertson, Frank Schneider.

Special Engineers.—J. J. Dimmick, Frank Porath, Benjamin Stokdyk. Total number offices licensed, 39.

PORT HURON, MICH.

Masters and Pilots.—Biddlecomb, Edward; Conkey, Arthur M.; Jones, James S.; Overud, Peter.

Second-Class Pilots.—Armstrong, Floyd W.; Allair, John B.; Autterson, Charles J.; Burk, Joseph; Brownlee, Robt.; Carleton, Edmund E.; Conkey, Charles M.; Carpenter, Edward W.; Ellery, William H.; Fox, John M.; Forrest, George F.; Forcier, Joseph J.; Geel, Howard; Goodwin, Thomas E.; Grashaw, J. Walter; Gustin, Edward A.; Henry, John W.; Henry, Edward; Heatherington, Nelson M.; Higer, Lee H.; Harlow, Frank T.; Irving, James H.; Loughin, George F.; Lytle, Charles; McGaw, Orton J.; Mitchell, William T.; Mossner, John S.; McKay, Richard; McLandress, Duncan; Millard, John; Montgomery, John A.; Payne, John J.; Palmer, Alfred J.; Payea, Bert; Rigney, James W.; Richmond, Hiram P.; Shean, Bernard W.; Spencer, Frank H.; Trudel, Louis M.

Joint Pilots and Engineers.—Bessay, Robert C.; Hoeft, Paul H.; Higer, Lee; Hine, Louis W.; Monroe, Albert J.; Platz, Fred. F.; Roderick, Edward A.; Sherping, Charles A.; Valintin, Joseph.

Engineers of steamers of 100 tons and over 10 tons.—Cummins, Al. E.; Clark, William H.; Surles, David.

First Assistant Engineers.—Ackley, John P.; Balfour, Herbert; Cannon, John; Dunn, Lewis J.; Elsholz, Otto A.; Flanagan, Elver C.; Guy, Otto A.; Hilton, John S.; Holzmiller, Joseph; Justin, Milford; Kummer, William M.; Leng, Wm. L.; Larabee, Thomas W.; Leslie, James; Moss, William H.; Schmidt, Albert J.; Saxe, John G.; Thrun, Herman; Zuehlke, William.

Special Engineers.—Jahr, William; Johnson, Jr., James R.; Miller, Felman.

Total number officers licensed, 77.

MARQUETTE, MICH.

Second Class Pilots.—Beaubien, William J.; Barnard, Sherman S.; Bourassa, Albert; Keegan, Robert P.; Morgan, Frank G.; Mooney, William T.; Nelson, Bernt; Purdy, James F.; Small, Thomas, A.

Special Pilot.—Jones, John; Lamerand, John; Mitchell, John.

Engineer in Charge.—Hill, William C.; McCullough, Ephraim; Ten Eycke, Philip.

First Asst. Engineer.—Dalton, John E.; Jones, James C.

Special Engineer.—Lamerand, Frederick. Total officers licensed 18.

OSWEGO, N. Y.

Masters and Pilots.—Burleigh, Guy R.; Lyons, Guy H.

Second Class Pilots.—Ackerman, Ralph B.; Carnegie, Robert; Hallahan, James D.; Henderson, George E; Wood, Franklin E.; White, Leon E.

Special Pilots.—Burtch, Henry W.; Consaul, Herbert E.; Ires, Charles C.; Lytle, Edward; Slate, Harvey E.

Joint Pilots and Engineers.—Hosley, Fred.; Hill, John.

First Assistant Engineers.—Blake, Robert A.; Cline, Samuel G.; Hill, Albert W.

Special Engineers.—Barnes, Williard J.; Willis, Edward. Total number of officers licensed 20.

The foregoing list of officers licensed for lake service show a grand total of 381, with no report from the Grand Haven district.

It is a singular ruling of the Steam Vessel Inspection Department that the names of officers licensed since the close of last year cannot be revealed, nor is access given to the license register at any port.

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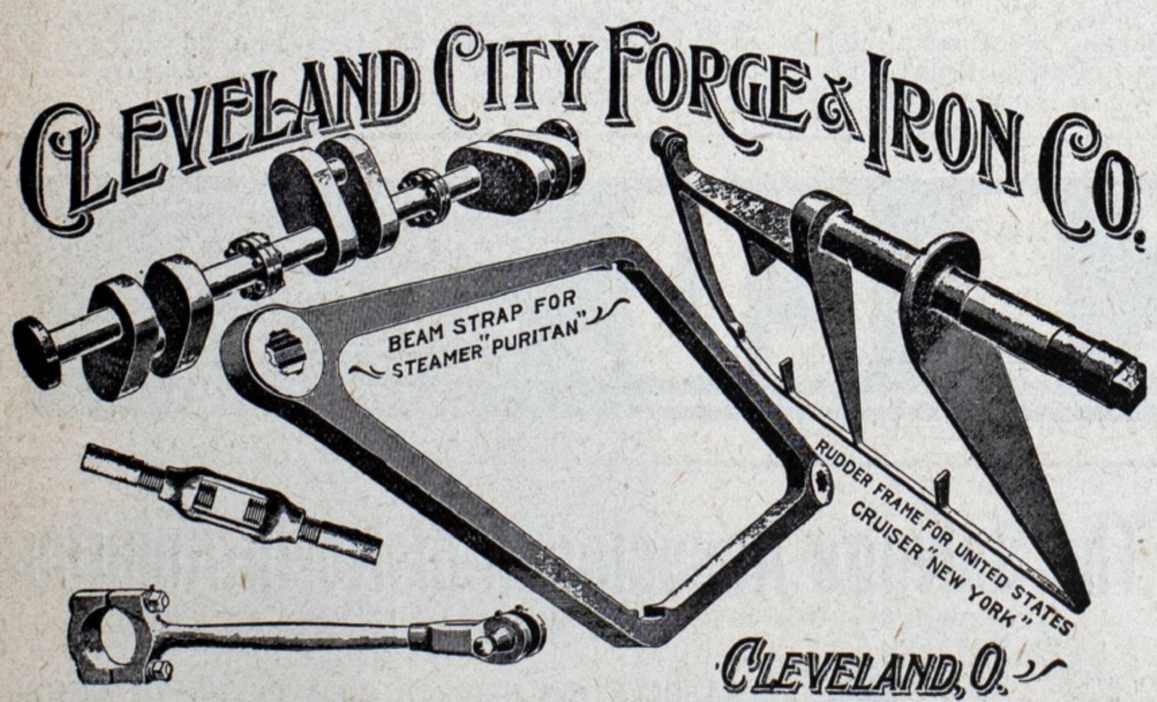

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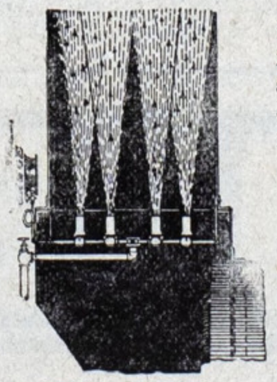

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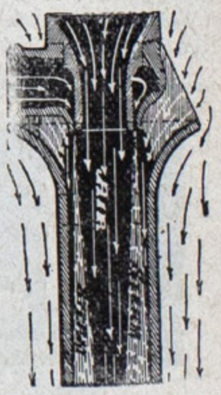

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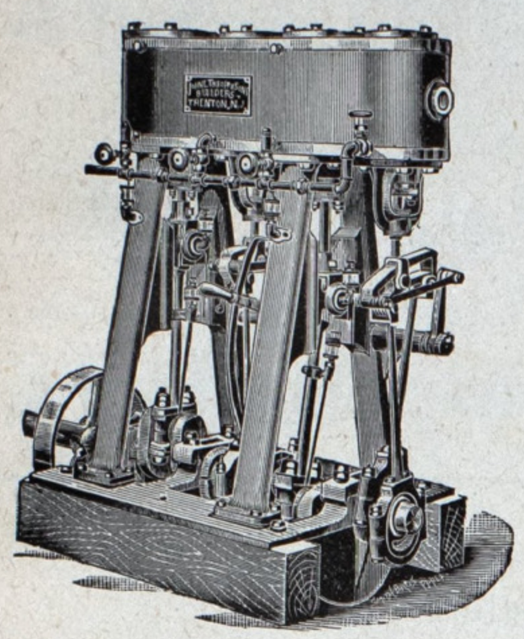

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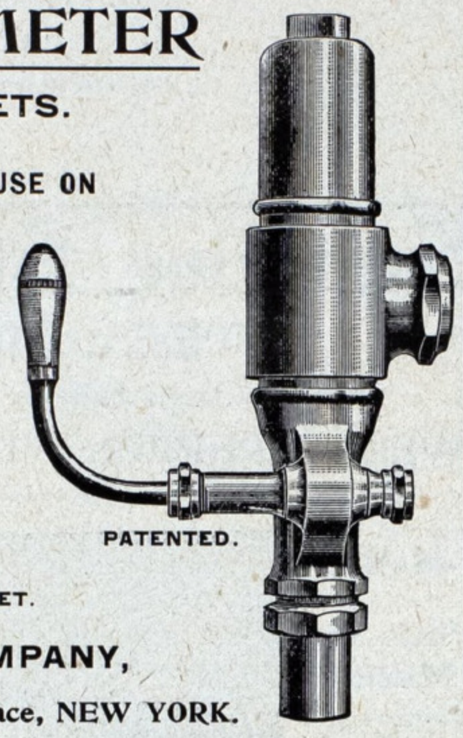

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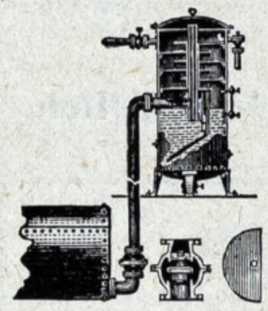

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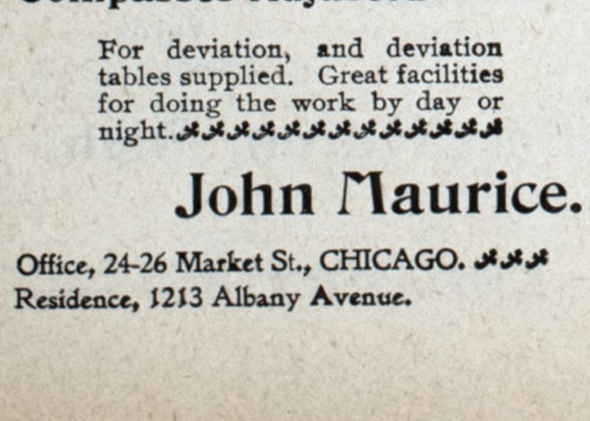

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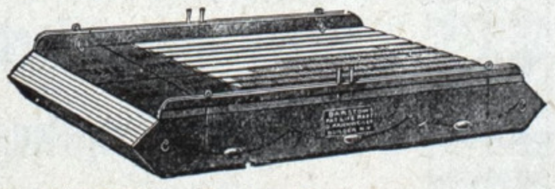

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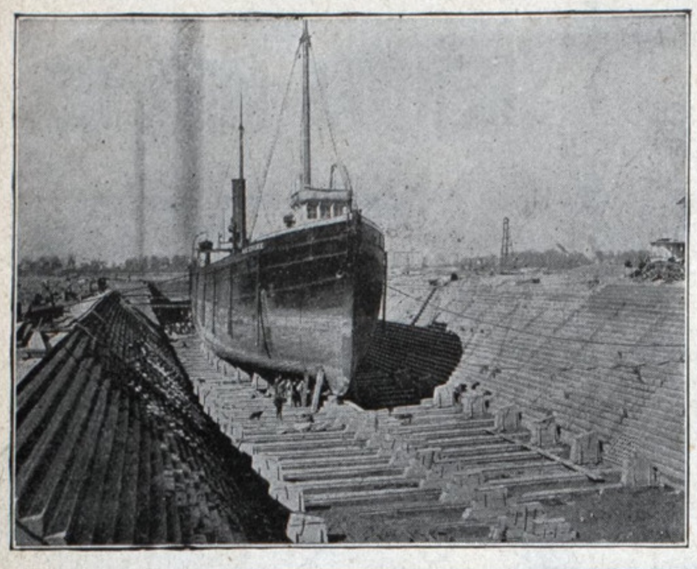

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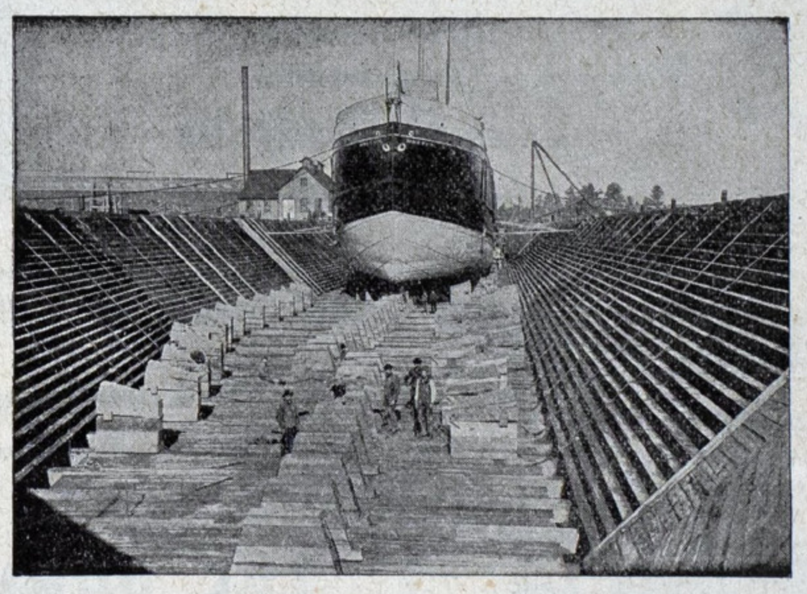

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